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TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

No. 113.

THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY, APPELLANT,

vs.

SAMUEL H. TURRILL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF ILLINOIS.

FILED OCTOBER 14, 1880.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

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Pleas in the circuit court of the United States for the northern district of Illinois, held at the United States court-rooms in the city of Chicago, in the district aforesaid, before the judges thereof, on Wednesday, the third day of March, in th e year of our Lord one thousand eight hundred and eighty, and of our Independence the one hundred and fourth.

WILLIAM H. BRADLEY, *Clerk.*

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

NORTHERN DISTRICT OF ILLINOIS, *sct:*

Be it remembered that on the ninth day of July, A. D. 1877, there was filed in the office of the clerk of the circuit court of the United States for the northern district of Illinois, at Chicago, in the district aforesaid, a certain mandate of the Supreme Court of the United States, in said entitled cause, which said mandate is in the words and figures following, to wit:

Mandate of the Supreme Court of the United States.

2 Mandate of the Supreme Court.

UNITED STATES OF AMERICA, *ss:*

[SEAL.] The President of the United States of America to the honorable the judges of the circuit court of the United States for the northern district of Illinois, greeting:

Whereas, lately, in the circuit court of the United States for the northern district of Illinois, before you, or some of you, in a cause between Samuel H. Turrill, complainant, and the Michigan Southern and Northern Indiana Railroad Company and E. B. Phillips, defendants, wherein the decree of the said circuit court entered in said cause on 16th day of July, A. D. 1874, is in the following words, viz:

And now at this day, the court being sufficiently advised upon the exceptions heretofore filed on the part of the complainant, as well as of the defendants, sustains all exceptions of the defendants to the master's report, which object to the amount of profits and the measure thereof made by the defendants, by the use of the complainant's machine; and also sustains all the exceptions of the defendants to the master's report, which object to the proportion allowed by the master of cut rails out of the number of mended rails, and also sustains all exceptions of the defendants which object to the allowance by the master of profits for the use of the complainant's machine by the defendants, before the complainant had title to the patent or any part or interest therein. And as to all other exceptions of the defendants to the master's report, the court overrules the same; and the court overrules the exceptions of the complainant to the master's report.

And the court being of opinion that the case should not be again referred back to the master, but that the court should find the amount of

profits which the defendants have respectively made by the use of the complainant's machine, doth find the same to be the sum of two hundred and twenty-two thousand six hundred and sixty-one dollars and eighty-nine cents.

It is thereupon ordered and decreed that the said defendant, the Michigan Southern and Northern Indiana Railroad Company, pay to the said complainant the sum of two hundred and twenty-two thousand six hundred and sixty-one dollars and eighty-nine cents, so as aforesaid found, within thirty days from the date of this decree; and in default thereof that execution issue therefor. And it is further ordered that the said Michigan Southern and Northern Indiana Railroad Company pay all the costs to be taxed herein.

And it is further ordered that the said Michigan Southern and Northern Indiana Railroad Company, its servants and agents, be perpetually enjoined and restrained from making or useing any machine for repairing railroad bars embracing the improvement or any substantial part thereof, for which letters patent were issued to Joseph D. Cawood.

And it is further ordered that this suit be dismissed as against E. B. Phillips.

As by the inspection of the transcript of the record of the said circuit court, which was brought into the Supreme Court of the United States by virtue of an appeal taken by the Michigan Southern and Northern Indiana Railroad Company, agreeably to the act of Congress in such case made and provided fully and at large appears.

And whereas, in the present term of October, in the year of our Lord one thousand eight hundred and seventy-six, the said cause came on to be heard before the said Supreme Court on the said transcript of record, and was argued by counsel, on consideration whereof it is now here ordered, adjudged, and decreed by this court that the decree of the said circuit court in this cause be, and the same is hereby, reversed, with costs, and that the said defendant recover against the said complainant, Samuel H. Turrill, twenty dollars for its costs herein expended, and have execution therefor. And it is further ordered that this cause be, and the same is hereby, remanded to the said circuit court for further proceedings to be had therein in conformity with the opinion of this court.—23d April, 1877.

3 You therefore are hereby commanded that such execution and further proceedings be had in said cause in conformity with the opinion and decree of this court as according to right and justice and the laws of the United States ought to be had, the said appeal notwithstanding.

Witness the honorable Morrison R. Waite, Chief Justice of said Supreme Court, the tenth day of May, in the year of our Lord one thousand eight hundred and seventy-seven.

D. W. MIDDLETON,
Clerk of the Supreme Court of the United States.

(Endorsed:) Filed July 9, 1877. Wm. H. Bradley, clerk.

And on the same day, to wit, the 9th day of July, A. D. 1877, in the record of the proceedings of said court in the said entitled cause before the Hon. Thomas Drummond, judge, is the following entry, to wit:

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

Now comes the said complainant, by his solicitors, and upon the
4 mandate and opinion of the Supreme Court of the United States, on file herein, and upon motion it is ordered that it be referred to Henry W. Bishop, esq., the master in chancery of this court upon the testimony now on file in this cause, to ascertain and report to this court what amount of damages should be awarded to the said complainant in the premises, and in case the said master is not able to ascertain from the testimony now on file in this cause what amount of deduction from the former judgment of this court should be made by reason of the use by the said defendant of the Beebe and Smith or the bayonet vice or the Michigan Southern machines, he is directed, as far as may be necessary to ascertain the amount of such deduction, to take such additional testimony as he may think best, and that he make report with all convenient speed. This order is made without prejudice to the right of the defendant to insist and claim before the master that the question of damages should be considered by him as modified as to the comparison of the Cawood machine with those adjudged by the Supreme Court not to be an infringement of that machine.

And the plaintiff here excepts to the last paragraph of this order.

Afterwards, to wit, on the 18th day of July, A. D. 1878, Henry W.
Bishop, esq., the master in chancery to whom this cause was re-
5 ferred, filed in said clerk's office his report in said entitled cause, which said report is in the words and figures following, to wit:

6 Circuit court of the United States, northern district of Illinois. In chancery.

SAMUEL H. TURRILL
v.
MICHIGAN SOUTHERN & NORTHERN INDIANA R. R. Co.,
and
SAME
v.
ILLINOIS CENTRAL R. R. Co.

MASTER'S REPORT.

To the honorable the judges of said court:

These causes having been re-referred to the undersigned as master, by the opinion and mandate of the Supreme Court and the supplemental order of the circuit court, with directions, upon the testimony already upon file, if that be sufficient, but if not, then upon additional testimony, to ascertain the amount which should be deducted from the former finding of the circuit court for the work shown to have been done by the Beebe and Smith, the bayonet vise, or the Michigan Southern machines, which, by

the judgment of the Supreme Court, have been considered not to have infringed the complainant's patent: I have, in compliance with such
7 order, been attended by the respective counsel, and have re-examined the testimony which has already been taken in these cases, together with such testimony as has been recently taken upon this reference; and upon such examination, and after hearing the arguments of counsel, and having considered the opinion of the Supreme Court, I have come to the following conclusions:

First. That the standard of comparison by which the deductions are to be made is a comparison between the common anvil and the Cawood machine, and not between the Cawood and the machines adjudged not to have been infringements.

Second. I find, as a matter of fact, that for the term within which this re-examination is directed, the proportion of work done, in the case of the Michigan Southern and Northern Indiana Railroad Company, upon machines decided by the court to have been non-infringing machines, is eighty one-hundred-and-ninety-sixths ($\frac{80}{196}$) of the total amount of the former decree. The former decree being for $222,666.89, the deduction as above stated would amount to $90,884.44, which deduction having been made, I find and report that there is now due and owing the complainant in that case the sum of one hundred and thirty-one thousand seven hundred and eighty-two and $\frac{45}{100}$ ($131,782.45) dollars.

Third. I find further, as a matter of fact, that for the term within which this re-examination is directed, the work done in the case of the Illinois Central Railroad Company upon machines decided by the court to have been non-infringing machines, computed upon the same basis as the former decree, amounted to the sum of $2,802.78, and for the same reasons, and on the evidence under the reference, I find that the gross sum of two thousand eight hundred and two and seventy-eight one-hundredths ($2,802.78) dollars should, for the non-infringing machines, be deducted from the former decree in this case, which deduction having been made, I find and report that there is due and owing the complainant in that case the sum of eighty-nine thousand one hundred and seventy-seven and fifty-five one-hundredths ($89,177.55) dollars.

8 In the case of the Illinois Central Railroad Company, I have examined the pleadings and evidence of the original case, and particularly the testimony of L. H. Clark, Shaw Stewart, Michael Lawler, and James Ryan, and also the depositions of witnesses taken on this reference in the case of the Michigan Southern and Northern Indiana Railroad Company.

And in the case of the Michigan Southern and Northern Indiana Railroad Company, I have examined the pleadings and evidence of the original case, and particularly the testimony of James Redmond; also the late depositions of D. Ferenbeck, George H. Dickens, John B. Stewart, H. D. Corbus, James Park, James Haverly, Norman Andrews, S. H. Turrill, George Wagner, Lyman Beebe, Charles Paine, George T. Smith, and James Redmond.

In arriving at these conclusions I have recognized the fact, which appears throughout in the record of these cases, and which was stated in my former report, that there is no difference between the amount of work capable of being done by the infringing and the non-infringing machines,

and in this respect have treated them all alike. I have determined the proportion of deduction as shown by the testimony as aforesaid, and applied it to the cases.

Considering the directions of the Supreme Court in its opinion and mandate in the light which seems to me to be the one which alone I am to be permitted to follow, I have come to the conclusion that the deductions as contended for by the complainant should be made in the case of the Michigan Southern and Northern Indiana Railroad Company, pursuant to the terms of this reference; which deductions are eighty one-hundred-and-ninety-sixths ($\frac{80}{196}$) of the former decree, leaving one hundred and sixteen one-hundred-and-ninety-sixths ($\frac{116}{196}$) of that decree as the amount which should be awarded in that case. Applying this method in the case of the Michigan Southern and Northern Indiana Railroad Company, the complainant's claim should be reduced to the sum of one hundred and thirty-one thousand seven hundred and eighty-two and forty-five one-hundredths ($131,782.45) dollars, which sum I now find to be due.

9 And in the case of the Illinois Central Railroad Company, after having made the same application and the deduction heretofore referred to, the balance found by me to be due to this complainant is the sum of eighty-nine thousand one hundred and seventy-seven and $\frac{55}{100}$ ($89,166.55) dollars.

I know of no other method afforded by the testimony by which an approximately correct result can be arrived at in these cases, except that furnished by the complainant's counsel. I have, therefore, adopted it as exhibiting most accurately and satisfactorily the information called for by the court. I herewith return the testimony recently taken, used by me upon this reference.

All of which is respectfully submitted.

HENRY W. BISHOP,
Master in Chancery of the Circuit Court of the United States for the Northern District of Illinois.

Dated Chicago, July 17th, A. D. 1878.

(Endorsed:) Filed July 18, 1878. Wm. H. Bradley, clerk.

10 Afterwards, to wit, on the 14th day of August, A. D. 1878, said defendant, by its solicitor, filed in said clerk's office its motion to set aside the report of said master in said entitled cause, which said motion is in the words and figures following, to wit:

Motion to set aside report of master.

In the United States circuit court for the northern district of Illinois.

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

And now comes the said defendant by George Payson, its solicitor, and moves the court to set aside the report heretofore, to wit, on the eighteenth day of July, 1878, filed in said cause by H. W. Bishop, esq., master in

chancery of said court, and recommit the same to the said master with directions to file a new and more detailed report, and assigns therefor the following reasons:

1. The said report contains no account from which the said defendant or the said court can determine the method or mode of calculation or the data from which the said master deduced his conclusions.

2. The said master has not stated the account at length with all
11 the facts found by him so that they shall be intelligible without reference to the testimony.

3. The said report does not show with any certainty the evidence on which the same is founded.

4. The said report nowhere states how or whence the said master derived the $\frac{80}{196}$ which he finds to have been the proportion of rails mended on the several non-infringing machines.

5. The said report fails to show what period of time is covered by it.

6. The said report fails to show the number of rails mended during said period.

7. The said master states that he has adopted the method furnished by complainants' counsel without showing even what that method is, much less explaining or justifying it.

8. The said report was filed by the said master without any notice to the said defendant, or any time for said defendant to make objections.

9. From the general nature of the said report it is impossible for said defendant to make its exceptions thereto with the desirable particularity.

10. Though the decree calls for an account and the reference to the master is presumed to have been made for that purpose yet no account is here presented.

Wherefore, and for the many other errors and omissions and im-
12 perfections in the said report, the said defendant moves that the same be set aside and recommitted to the master, with directions to file a new report with the grounds of his conclusions and the evidence in support of those conclusions more fully and clearly stated and set forth.

August 14th, 1878. GEORGE PAYSON,
Defendant's Solicitor and of Counsel.

(Endorsed:) Filed Aug. 14, 1878. Wm. H. Bradley, cl'k.

And on the same day, to wit, the 14th day of August, A. D. 1878, said defendant, by its solicitor, filed in said clerk's office its exceptions to the report of said master in said entitled cause, which said exceptions are in the words and figures following, to wit:

Exceptions to master's report.

In the United States circuit court, in the northern district of Illinois.

SAMUEL H. TURRILL
vs.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

Exceptions taken by the defendant to the report made herein by H. W.

Bishop, esq., master in chancery of this court, and filed July 18,
13 1878, under the interlocutory decree of July 9th, 1877.

The said defendant, not waiving the motion heretofore, to wit, on the 14th day of August, 1878, filed in said cause to set aside and recommit said report, but still insisting thereon, now comes and presents its exceptions to said report as follows:

1. For that the said report contains no account from which the said defendant or the said court can determine the method or mode of calculation or the data from which the said master deduced his conclusions.

2. For that the said master has not stated the account at length with all the facts found by him so that they shall be intelligible without reference to the testimony.

3. For that the said report does not show with any certainty the evidence on which the same is founded.

4. For that the said report nowhere states how or whence the said master derived the $\frac{80}{196}$ which he finds to have been the proportion of rails mended on the several non-infringing machines.

5. For that said report fails to show what period of time is covered by it.

6. For that the said report fails to show the number of rails mended during said period.

7. For that the said master states that he has adopted the method furnished by complainants without showing even what that method is, much less explaining or justifying it.

14 8. For that the said report was filed by the said master without any notice to the said defendant, or any time for said defendant to make objections.

9. For that though the decree calls for an account, and the reference to the master is presumed to have been made for that purpose, yet no account is here presented.

10. For that the said master has charged the said defendant with the difference in the cost of mending between the Cawood and the old swage-block, as if that were the only machine then free and open to the defendants to use; whereas during the whole or a considerable portion of the time covered by his said report there were several other such machines, to wit, the Springfield bayonet, the bayonet Vice, the Beebe and Smith, and the Michigan Southern machines, all as good or better than the said Cawood, and all open and free to said defendant to use.

11. For that in making his said comparison of the cost of mending he has confined himself to the said swage-block machine, and has refused to consider the Springfield bayonet machine, used at Springfield as early as 1845.

12. For that in like manner he has refused to consider the Michigan Southern machine.

13. For that he has in like manner refused to consider the bayonet vice machine.

14. For that in like manner he has refused to consider the Beebe
15 and Smith machine, though it appears that the said defendant had a full license to use said machine during the whole time covered by said report.

15. For that said master has charged said defendant with a large number of rails mended prior to February 18th, 1862, the time when said plaintiff became the owner of said machine.

16. For that said master has assumed that the Cawood machine, as described in the said patent, was the same as the rack and pinion machine used by the defendant, whereas the evidence shows that the said Cawood was a very inferior machine, and not capable of doing as much work in the same time as the said rack and pinion.

17. For that the said master has made his report on the theory that this defendant had used the Cawood machine proper as described in said patent, whereas the evidence shows that the form of machine actually used by this defendant was much superior to the said Cawood.

18. For that the master has credited all the savings found by him to have been made by defendant solely to the advantages supposed to be possessed by the Cawood machine as described in said patent, whereas a large part of said advantage is due to the improved form of the machine used by the defendant, and not to the said Cawood machine.

16 19. For that the said master has found that said defendant mended only $\frac{80}{196}$ of its rails on the non-infringing machines, whereas the evidence shows that the proportion so mended was much larger than that, as would appear if the said master had properly stated the account.

20. For that the said master has found the sum of $131,782.45 to be the amount of defendant's savings, which is vastly in excess of the correct amount on any theory according to the evidence in the case.

21. For that he has found said sum to be due, whereas it is impossible from the evidence in the case to ascertain the amount of said savings. Said evidence being partial and incomplete, and largely based on conjectures, estimates, and assertions.

22. For that he has found said sum to be due, whereas for the reason just stated only nominal damages should have been allowed.

23. For that said master reports that he has examined the late depositions of D. Ferenbeck, George H. Dickens, John B. Stewart, H. D. Corbus, James Park, James Haverly, Norman Andrews, S. H. Turrill, George Wagner, Lyman Beebe, Charles Paine, George F. Smith, and James Redmond, whereas there are no such depositions of Ferenbeck, Corbus, Park, or Wagner in this case.

17 24. For that the said master found and in and by his said report decided that the several machines in use for holding railroad rails during the process of reparation were equally valuable, thereby giving to the said Cawood machines and to the said complainant the benefit of improvements not covered by the Cawood patent.

25. For that the said master as is shown in and by his said report adopted a false and improper standard of comparison by which to test the value to the said defendants of the Cawood machines in this, viz: The said master, notwithstanding the knowledge and public use of machines for holding rails whilst undergoing repairs, which in his said report are admitted to be equally as good as the Cawood machines, and which are admitted and decided to be non-injuring, still, for the purpose of fixing the amount to be paid by the defendant to the complainant, ignored the existence of said non-injuring machines in respect to all rails not mended thereon and as to all such rails fixed the said amount at what he found to be the difference between mending them upon the Cawood machines and upon the common swage block, whereas the defendant insists upon its right to have the comparison made between the cost of doing the work upon the

Cawood machines and the best non-infringing machines known and free and open to the public or to the said defendant.

In each and all of which particulars the said defendant excepts
18 to the said report of the said master as erroneous, and appeals therefrom to the judgment of this honorable court.

GEORGE PAYSON,
Defendants solicitor and of Counsel.

(Endorsed:) Filed Aug. 14, 1878. Wm. H. Bradley, cl'k.

Afterwards, to wit, on the 1st day of October, 1878, in the record of the proceedings of said court in said entitled cause before the Hon. John M. Harlan, one of the justices of the Supreme Court of the United States, is the following entry, to wit:

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

On motion of complainant's counsel, it is ordered that the motion to confirm the master's report, the exceptions of the defendants notwithstanding, be set down to be heard on Tuesday, the eighth day of October, A. D. 1878.

Afterwards, to wit, on the 10th day of July, A, D. 1879, in the record of the proceedings of said court in said entitled cause before the Hon.
19 John M. Harlan, one of the justices of the Supreme Court of the United States, is the following entry, to wit:

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

Now, on this tenth day of July, A. D. 1879, come the respective parties by their counsel in the above case, and the preliminary motion of the defendant to recommit the report of the master for certain causes now coming on to be heard, the court overrules the said motion to recommit the said report, but directs the master with all convenient speed to return and make a part of his report heretofore filed a detailed schedule or statement, showing the manner in which he arrived at the conclusion stated in his report and the mode in detail adopted by him in that behalf in the above case, and upon the filing of said additional statement liberty is given to the defendant to file additional exceptions, if it is so advised, within ten days.

Afterwards, to wit, on the 12th day of July, A. D. 1879, in the record of the proceedings of said court in said cause, before the Hon. John M. Harlan, one of the justices of the Supreme Court of the United States, is the following entry, to wit:

20 SAMUEL H. TURRILL
vs.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

Now come the parties by their counsel, and the master having filed schedules, etc., to his report as directed by this court in its order of the tenth of July, A. D. 1879, and the parties now consenting, it is ordered that the exceptions filed and to be filed to the master's report in said cause be heard at Madison on the twenty-ninth day of July instant.

On the same day, to wit, the 12th day of July, A. D. 1879, said master in chancery, Henry W. Bishop, filed in said clerk's office his supplemental report in said entitled cause, which said report is in the words and figures following, to wit:

Supplemental report of master.

21 In the circuit court of the United States for the northern district of Illinois. In chancery.

SAMUEL H. TURRILL
v.
THE ILLINOIS CENTRAL RAILROAD COMPANY.

SAME
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY.

SUPPLEMENTAL REPORT OF THE MASTER.

To the honorable the judges of said court:

In obedience to the direction of the court, the undersigned, as master, doth now return herewith Schedule A, showing in detail how he arrived at the deduction of two thousand eight hundred and two dollars and seventy-eight cents ($2,802.78), in the case of the Illinois Central Railroad Company. And also Schedule B, showing in detail how he arrived at the deductions directed to be ascertained and made in the case against the Michigan Southern and Northern Indiana Railroad Company, and which in his report he ascertained to be the sum of ninety thousand eight hundred and eighty-four dollars and forty-four cents ($90,884.44).

And I, the said master, report that the principle upon which I ascertained the amount of the deduction last aforesaid was this, to wit: I found, as stated in said report as a fact, that the machines found by the Supreme Court to be non-infringing could, under like circumstances, perform the same amount of work within the same period of time as could the machines adjudged by that court to be infringements of the Cawood patent; then, considering that I was directed by the mandate of the Supreme Court, as well as by the order of the circuit court, to deduct the amount of work, and its value, done by the said non-infringing machines and included

in the former decree of this court, I proceeded to ascertain, as
22 indicated by Schedule B, how many of both the infringing and non-infringing machines, and for how long a time, had been used at each of the several places on the road of the last-named defendant, and I then reduced the machines, where there was more than one and for different times, to the equivalent of one machine for the proper equated time. By this means I found, as is shown more in detail by Schedule B, that the use of the non-infringing machines was equal to the use of one machine for eighty years eight months and ten days within the period of inquiry; and that within the same period of inquiry the use of the infringing machines was equivalent to the use of one machine for one hundred and sixteen years and ten months. Taking the years as a basis, this gave the following result, viz: That the use of the infringing and non-infringing machines together, as represented and covered by the former decree, was equivalent to the use of one machine for one hundred and ninety-six years, for which in the former decree damages had been given to the sum of two hundred and twenty-two thousand six hundred and sixty-six dollars and eighty-nine cents ($222,666.89). But, as now found, the non-infringing machines, so called, had done eighty parts of the work for which judgment had been thus rendered; I therefore deducted $\frac{80}{196}$ of the amount of the former decree, thereby leaving the balance of $\frac{116}{196}$ of the former decree to stand as representing the value of the work done by the infringing machines.

Dated this 12th day of July, A. D. 1879.

Respectfully submitted.

HENRY W. BISHOP,
Master, &c.

Filed July 12, A. D. 1879.

WM. H. BRADLEY,
Clerk.

SCHEDULE A.

This cause having been referred to the master to make certain deductions, on account of the Beebe and Smith and bayonet vise machines, from the original decree entered in this cause in July, 1874, for the sum of $91,980.33, the complainant now comes and makes reference
23 to the printed testimony, furnishing the basis for such deduction as follows:

1. Deduct 542 rails repaired on the Beebe and Smith machine at Centralia, as testified to by L. H. Clark (printed record, page 146), at 17.71 inches, as found by the master; making 800 feet, at 36 cents per foot..... $288 00
2. Deduct 333 frogs, being one-half of the number made at the Weldon shops from September 1st, 1867, to September 9th, 1870 (printed record, pages 16 and 147, and 262–3), where one bayonet-vise machine and two Illinois Central block machines were used, at 13 feet per frog; making 4,329 feet, at 36 cents per foot..... 1,558 44
3. Deduct 1,800 rails, being 50 rails per month for 36 months, repaired on bayonet-vise machine, from September 1st,

1867, to September 9th, 1870 (printed record, page 264), at 17.71 inches per rail ; making 2,656 and one-half feet, at 36 cents per foot	956 34
Total	2, 802 78
Balance due the complainant	$89, 177 55

Reference being made to the printed record pages in support of the foregoing items, as follows:

Item 1. Testimony of L. H. Clark, pages 146, 147.

Item 2. Testimony of Shaw Stewart, pages 257, 259 ; Michael Lawler, page 265 ; James Ryan, page 267, and pages 16, 39.

Item 3. Testimony of Shaw Stewart, page 264 ; L. H. Clark, page 147.

SCHEDULE B.

Reference to evidence touching the use of the Cawood machines, or their equivalents, by said Michigan Southern and Northern Indiana Railroad Company, from February, 1862, to November, 1869.

24 1st. At Adrian, Michigan :

Four machines were used from February 18, 1862, to November, 1869 ; 7 years 8 months and 10 days = 1 machine for 30 years 9 months and 10 days. (See evidence of James Redmond, ans. to int. where he says there were four Cawoods in use from fall of 1856 to summer of 1869—dep'n. ints. 4 and 5 ; and see book, pp. 484–5 and 624, being record in Supreme Court U. S.)

But in the use of the Cawood, furnace fires, it appears, were used altogether at Adrian, and thereby one-third to one-half more each day was mended than was done at the open fires. (Geo. H. Dickens, ans. to int. 19 ; James Redmond, ans. to int. 13.)

The ordinary day's work on the Beebe and Smith or Cawood, as testified to by defendant's witnesses, was, at the open fires, from 8 to 10 rails. (John B. Stewart, book, p. 664, int. 32 ; H. J. Corbus, book, p. 674, X-int. 46.)

Therefore, there was done at Adrian, on the Cawood machine, one-third to one-half more than ordinary day's work on the B. & S.,—say one-half, which is equal to two machines extra—2 for 7 years 8 months and 10 days = 15 y'rs, 4 mo's, and 20 d's.

2d. Coldwater, Michigan :

2 Cawood machines were used from February 18, 1862, to February 18, 1866—4 years = one machine for 8 years.

2 Cawood machines were used from February 18, 1862, to November 1, 1868—6 y'rs 8 mo's and 10 d's = 1 machine for 13 y'rs 4 mo's and 20 d's.

2 Cawood machines were used at furnace fires for 4 years = one extra machine for 4 years. (Geo. H. Dickens, ans. int's 19 and 20.)

3d. Laporte, Indiana :

6 Cawood machines were used from February 18, 1862, to February 18, 1865—3 years = 1 machine for 18 years. (1.) As to number of machines see evidence of James Park, book, p. 660, int's 6 and

25 7. (2.) Beebe & S. machine, put in in 1865, bayonet vice; (*a*) James Haverly, depn. ints. 10, 13; (*b*) Norman D. Andrews, depn.; (*c*) Turrill, as to machines at Detroit.

The assumption is that 6 or 7 machines were used all the time from 1862 to 1869, and that in 1865 2 Cawoods were displaced by 1 B. & S. & 1 B. V.

4 machines from 1865 to 1869, as above; 4 yrs. 8 mo. & 10 ds.=18 yrs. 9 mos. & 10 ds.

4th. Hudson, Michigan:

1 Cawood machine was used for 5 years. (Geo. Wagner, book, p. 665, ints. 6–11.)

(1). This witness (defendant's) worked on and describes the machine.

5th. Kendallville:

1 Cawood machine was used from June, 1864, to January, 1868—3 yrs. 6 mos. (John P. Stuart, depn., ints. 65–7. D. Ferenbeck, book, p. 279.)

(1). Ferenbeck says he went to Wauseon about six years before his evidence was taken in 1870, January 12; book, p. 279, int. 5.

(2). Stuart says he commenced at Kendallville same year and mo. as they did at Wauseon. (Ints. 65–7.)

NON-INFRINGING MACHINES.

1st. Adrian, Michigan:

4 Beebe & Smith machines were used from August 1, 1862, to August 1, 1866—4 years=1 machine for 16 years. (J. Redmond, book, p. 484, ints. 11. And see depn., ints. 5, 10, 11. See Turrill's depn.)

2d. Monroe:

2 Beebe & Smith machines were used from August 1, 1862, to November 1, 1868—6 years and 3 mos.=1 machine for 12 years and 6 mos. (J. Redmond, depn., int. 27 and 28.)

26 NOTE.—Without positive proof thereof, the defendant is given the benefit of having used three machines during all the time above stated.

3d. Wauseon, Ohio:

2 Beebe & Smith machines were used from January, 1864, to Jan., 1868, 4 years=1 machine for 8 years.

(D. Ferenbeck, book, p. 279, int. 5. And see depn. taken Jan. 12, 1870, in printed book.)

4th. Coldwater, Michigan:

2 Beebe & Smith machines were used from February 18, 1866, to November, 1868—2 yrs. 8 mos. and 10 ds.=1 machine for 5 years, 4 mos. and 20 ds. (Geo. H. Dickens, depn., int. 8.)

5th. Elkhart, Indiana:

2 Beebe & Smith machines were used from February 18, 1862, to November, 1868—6 yrs. 8 mo. and 10 ds.=1 machine for 13 years, 4 mo. and 20 ds.

2 Beebe & Smith machines were used from August 1, 1862, to November, 1868—6 yrs. and 3 mos.=1 machine for 12 yrs. and 6 mos.

NOTE.—Defendant is given the benefit of having used 2 machines from Feb. 18, to Aug. 1, 1862. (J. Redmond, book, p. 484. And see Turrill's deposition.)

6th. Kendallville:

1 Beebe & Smith machine was used from January, 1864, to January, 1868—4 years. (John P. Stuart, depn., ints. 65–6. D. Ferenbeck, book, p. 270.)

7th. La Porte, Indiana:

1 Beebe & Smith machine was used from February 18, 1865, to November, 1869—4 yrs. 8 mos. and 10 days.

Bayonet-vise machine was used from August 1, 1855, to November, 1868—4 yrs. and 3 mos. (James Haverly, depn., ints. 7 and 12. Samuel H. Turrill.)

Haverly says to int. 14, that the Beebe & Smith was used very little, but they are credited full time.

Andrew's deposition.

27 RECAPITULATION.

NON-INFRINGING MACHINES.

Adrian, Mich.	16	yrs.				
Monroe, "	12	"	6	mo's.		
Wauseon, O.	8	"				
Coldwater, Mich.	5	"	4	"	20	d's.
Elkhart, Ind.	13	"	4	"	20	"
" "	12	"	6	"		
Kendallville	4	"				
La Porte	4	"	8	"	10	"
"	4	"	3	"		
	80	"	8	"	20	"

INFRINGING MACHINES.

Adrian, Mich.	30	yrs,	9	mo's,	10	d's.
" "	15	"	4	"	20	"
Coldwater	25	"	4	"	20	"
La Porte, Ind.	36	"	9	"	10	"
Hudson, Mich.	5	"				
Kendallville	3	"	6	"		
	116	"	10	"		

(Endorsed:) Filed July 12th, 1879. Wm. H. Bradley, cl'k.

28 Afterwards, to wit, on the 16th day of July, A. D. 1879, said defendant, by its solicitor, filed in said clerk's office its exceptions to the original and supplemental reports of said master in said entitled cause, which said exceptions are in the words and figures following, to wit:

Exceptions to master's original and supplemental reports.

29 Exceptions to master's report.

In the United States circuit court, northern district of Illinois.

SAMUEL H. TURRILL *v.* MICHIGAN SOUTHERN AND NORTHERN INDIANA Railroad Company.	In chancery.

Exceptions taken by defendant to the original amended and supplemental reports made herein by H. W. Bishop, master in chancery, under interlocutory decrees of July 9th, 1877, and July 10th, 1879.

1. For that the said report was filed by the said master without any notice to said defendant or any time for said defendent to make objections.

2. For that said master has charged said defendant for a large number of rails mended prior to February 18th, 1862, the time when said plaintiff became sole owner of said patent.

3. For that the said master has charged the said defendant with the difference in the cost of mending between the Cawood and the old swage-block, as if that were the only machine then free and open to the defendants to use; whereas during the whole or a considerable portion of the time covered by said report there were several other such machines, to wit, the Springfield bayonet, the bayonet vise, the Beebe and Smith, and the Michigan Southern machines, all as good or better than said Cawood, and all open and free to said defendant to use.

4. For that, in making his said comparison of the cost of mending, he has confined himself to the swage-block machine, and has refused to consider the Springfield bayonet machines used at Springfield as early as 1845.

5. For that in like manner he has refused to consider the Michigan Southern machine.

6. For that in like manner he has refused to consider the bayonet-vise machine.

7. For that in like manner he has refused to consider the Beebe
30 & Smith machine, though it appears the said defendant had a full license to use said machine during the whole time covered by said report.

8. For that the said master, as is shown in and by his said report, adopted a false and improper standard of comparison by which to test the value to the said defendan s of the Cawood machines in this, viz: The said master, notwithstanding the knowledge and public use of machines for holding rails whilst undergoing repairs, which in his said report are admitted to be equally as good as the Cawood machines, and which are admitted and decided to be non-infringing, still, for the purpose of fixing the amount to be paid by the defendant to the complainant, ignored the existence of said non-infringing machines in respect to all rails not mended thereon, and as to all of said rails fixed the said amount at what he found to be the difference between mending them upon the Cawood machines

and upon the common swage-block; whereas the defendant insists upon its right to have the comparison made between the cost of doing the work upon the Cawood machines and the best non-infringing machines known, and free and open to the public or to the said defendant.

9. For that the said master has assumed that the Cawood machine, as described in said letters patent, was the same as the rack and pinion machine used by this defendant; whereas the evidence shows that the said Cawood was a very inferior machine, and not capable of doing as much work in the same time as the said rack and pinion.

10. For that the said master has made his report on the theory that this defendant had used the Cawood machine proper, as described in said patent; whereas the evidence shows that the form of machine actually used by this defendant was much superior to the said Cawood.

11. For that the said master has credited all the savings found by him to have been made by defendant solely to the advantages supposed to be possessed by the Cawood machine, as described in said patent; whereas a large part of said advantage is due to the improved form of the machine used by the defendant, and not to the said Cawood machine.

12. For that said master has found that said defendant mended
31 only $\frac{80}{196}$ of its rails on the non-infringing machines; whereas the evidence shows that the proportion so mended was much larger than that, as would appear if the said master had properly stated the account.

13. For that the said master has found the sum of $131,782.45 to be the amount of defendant's savings, which is vastly in excess of the correct amount, on any theory, according to the evidence in the case.

14. For that he has found said sum to be due; whereas, it is impossible, from the evidence in the case, to ascertain the amount of said savings, said evidence being partial and incomplete, and largely based on conjectures, estimates, and assertions.

15. For that he has found said sum to be due, whereas, for the reason just stated, only nominal damages should have been allowed.

16. For that the said master found, and in and by his said report decided, that the several machines in use for holding railroad rails during the process of reparation were equally valuable, thereby giving to the Cawood machine and to the said complainant the benefit of improvements not covered by the Cawood patent.

17. For that said master reports that he has examined the late depositions of D. Ferenbeck, George H. Dickens, John B. Stewart, A. B. Corbus, James Park, James Haverly, Norman Andrews, S. H. Turrill, George Wagner, Lyman Beebe, Charles Paine, George F. Smith, and James Redmond; whereas there are no such depositions of Ferenbeck, Corbus, Park, or Wagner in this case.

18. For that said master has found that four Cawood machines were used at Adrian from February 18, 1862, to November, 1869, citing the evidence of Redmond, where Redmond says till summer of 1869.

19. For that he finds one-half more work was done at Adrian on the Cawood than on the Beebe and Smith, without any evidence to sustain such finding.

20. For that he finds that two Cawood machines were used at Coldwater from February 18, 1862, to February 18, 1866, citing evidence of Dickens;

whereas it appears from said evidence that said two machines were only used till the fall of 1864.

21. For that he finds that one-half more work was done on two of the Cawood machines at Coldwater than on the Beebe & Smith, without out any evidence to sustain said finding.

32 22. For that he finds that there were six Cawoods in use at La Porte from February 18, 1862, to February 18, 1865; whereas the evidence wholly fails to support such finding.

23. For that he finds there were four Cawoods in use at La Porte from 1865 to 1869; whereas the evidence wholly fails to support such finding.

24. For that he finds there was one Cawood in use at Hudson for five years, citing evidence of George Wagner; whereas Wagner's description of the machine is wholly ambiguous, and Corbus says expressly that it was a Beebe & Smith machine.

25. For that he finds that one Cawood was used at Kendallsville from June, 1864, to January, 1868, citing evidence of Stewart & Ferenbeck; whereas said evidence wholly fails to support said finding.

26. For that he finds that four Beebe & Smith's machines were in use at Adrian from August 1, 1862, to August 1, 1866, citing evidence of Redmond; whereas Redmond says they were in use till summer of 1867.

27. For that he finds that two Beebe & Smiths were used at Wauseon from January, 1864, to January, 1868, citing evidence of Ferenbeck; whereas it appears from said evidence that they were used for 6 years.

28. For that he finds that two Beebe & Smith's were used at Coldwater from February 18, 1866, to November, 1868; whereas it appears from the evidence that one of these machines was put up the first of May, 1865, and the other still earlier.

29. For that he finds that two Beebe & Smith's were used at Elkhart from February 18, 1862, to November, 1868, and two in use from August 1, 1862, to November, 1868, without citing any evidence in support of said finding; whereas it appears from defendant's answer that they had four such machines in use at Elkhart eight years.

30. For that he finds that there was one Beebe & Smith's in use at Kendallville from January, 1864, to January, 1868, citing Stewart & Ferenbeck; whereas it appears from Stewart's testimony that they began in 1861 or '2, and continued to mend on these hand-machines till the fall of 1868; and from that of Ferenbeck that they were in use at least six years.

33 31. For that he finds that one bayonet-vise machine was in use at La Porte, from August 1, 1865, to November, 1869, citing evidence of Haverly; whereas Haverly says he thinks it was put there between 1863 and 1865.

32. For that he has found the number of non-infringing machines to have been equal to only one machine for 80 years 8 mo's and 10 days; whereas, according to the evidence, the proportion should have been much larger.

33. For that he has found the number of infringing machines to have been equal to one machine for 116 years and 10 months; whereas, according to the evidence, the proportion should have been much less.

34. For that the amount due from said defendant, even on the supposi-

tion that the above theory and proposition are both correct, is very much less than found by the master, it appearing from defendant's answer, which is the only evidence in the case on this point, that they mended from February 18, 1862, down to November, 1869, about 450,000 rails, which, deducting one-fourth for cut rails, and calling the mend 18 inches a rail, and the cost 36 cents a foot, would amount to about $108,000 instead of $131,782.45, as found by him.

In each and all of which particulars the said defendant excepts to the said report of the said master as erroneous, and appeals therefrom to the judgment of this honorable court.

GEORGE PAYSON,
Solicitor for Defendant and of Counsel.

Filed July 16, 1879.

WM. H. BRADLEY, *Clk.*

34 Afterwards, to wit, on the 3rd day of March, A. D. 1880, in the record of the proceedings of said court in said entitled cause, before the Hon. John M. Harlan, one of the justices of the supreme court of the United States, is the following entry, to wit:

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY. } In chancery.

This cause came on to be further heard before the honorable John M. Harlan, sitting as circuit justice, on the twenty-ninth day of July, A. D. 1879, being one of the days of the July term of said court, upon the report of Henry W. Bishop, esq., master, filed herein on the eighteenth day of July, A. D. 1878, and upon his supplemental report, filed herein on the twelfth day of July, A. D. 1879, and upon the evidence and orders therein referred to, and also upon the original exceptions to the said master's report, filed on the fourteenth day of August, A. D. 1878, and upon the modified exceptions filed to the original and supplemental reports of the said master on the sixteenth day of July, A. D. 1879, and the said exceptions having been then and there argued by counsel, and the said court having taken the same under advisement until this day, to wit, the third day of
35 March, A. D. 1880, and being now, to wit, on the day and year last aforesaid, fully advised in the premises, and the respective parties being now present here in court by their respective solicitors; it is thereupon hereby ordered, adjudged, and decreed by the said justice that all of the exceptions of the said defendant be, and the same are hereby, overruled, in so far as the same are inconsistent with the order and judgment of the court hereinafter made; and it is further hereby found, adjudged, and decreed that the rule or method adopted by the master to ascertain the amount due the said complainant is in accordance with the opinion and mandate of the Supreme Court and the supplemental order of the circuit court in this case, but that in applying the said rule the master has given undue weight to some of the complainants' testimony where the complainant cannot prove the exact amount of damage sustained, and where the defendant is unable to show the amount of work actually done

with different machines during the period of accounting. By reason whereof the master hath found that only $\frac{80}{196}$ of the original decree of two hundred and twenty-two thousand six hundred and sixty-six dollars and eighty-nine cents ($222,666.89) represents and is on account of the profits made by the non-infringing machines, while the defendant insists that upon the theory adopted by the master such profits constitute
36 $\frac{104}{183}$ of the said original decree; and it further appears to the court that the defendant on this basis claims there is due to the complainant only the sum of ninety-six thousand one hundred and twenty-one dollars and eighty-nine cents ($96,121.89), while the said master reported the sum due to be one hundred and thirty-one thousand seven hundred and eighty-two dollars and forty-five cents ($31,782.45).

And thereupon the court, having considered the evidence in this behalf, doth find and adjudge that there ought to be a deduction from the amount and finding of the said master, and that the ends of justice will be attained by allowing to the said defendant as such deduction one-half of the difference between the said finding of the said master and the sum which the said defendant, on the said complainant's theory of the case, admits to be due. Wherefore the court doth find that the said complainant was, on the said twelfth day of July, A. D. 1879, entitled to a decree against the said defendant for the sum of one hundred and thirteen thousand nine hundred and fifty-two dollars and seventeen cents ($113,952.17), and that the said complainant is entitled to interest on the said last-mentioned sum at the rate of six per cent. per annum from the day and year last afore-
37 said down to the date of the entry of this decree, to wit, the third day of March, A. D. 1880. And it appearing to the court that the said interest for the time aforesaid amounts to the sum of four thousand three hundred and sixty-eight dollars and twelve cents ($4,368.12), and that the said two sums of money last mentioned amount, at the date of the entry of this decree, to the sum of one hundred and eighteen thousand three hundred and twenty dollars and twenty-nine cents ($118,320.29), for which the said complainant is entitled to judgment; it is thereupon hereby considered, ordered, adjudged, and decreed by the court that the said complainant do have and recover of the said defendant, the Michigan Southern and Northern Indiana Railroad Company, the said last-mentioned sum of one hundred and eighteen thousand three hundred and twenty dollars and twenty-nine cents ($118,320.29), besides the costs herein since the remanding hereof, to be taxed by the clerk of this court, and that the said complainant have execution in the premises according to law, and that execution issue accordingly.

And thereupon the solicitor of the said defendant prays an appeal from the decree aforesaid, which is allowed upon the filing of an appeal bond in the sum of one hundred and fifty thousand dollars ($150,000.00), with sureties to be approved by the court.

38 On the same day, to wit, the 3rd day of March, A. D. 1880, the following certificate of evidence was filed in the said clerk's office in said entitled cause, to wit:

Certificate of evidence.

United States circuit court, northern district of Illinois.

SAMUEL H. TURRILL
v.
THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY,
and
SAMUEL H. TURRILL
v.
THE ILLINOIS CENTRAL RAILROAD COMPANY.

Certificate of evidence for the record of the United States Supreme Court.

It is hereby agreed by and between the parties to the above-entitled suits that the following is a correct statement of the evidence presented by both parties in the above-entitled suits since the same were remanded to this court:

First. The testimony of the following named witnesses for the complainant: George H. Dickens, John P. Stuart, James Redmond, James Haverly, Norman D. Andrews, and Samuel H. Turrill.

Second. The testimony of the following named witnesses for the
39 defendants: Lyman Bebee, Charles Paine, C. D. Roys, and George F. Smith.

Third. That the depositions of the witnesses above named were taken and may be read in each of the above-entitled causes so far as pertinent thereto.

Fourth. All letters patent, models, reports, and exhibits produced and used in the circuit court in these cases may be produced, referred to, and used on the hearing in the Supreme Court with the same force and effect as if each and all of them were made part of this record.

Fifth. That the said evidence may be made a part of the record in the said suit against the Michigan Southern and Northern Indiana Railroad Company, and may be used in the suit against the Illinois Central Railroad Company before the Supreme Court so far as pertinent thereto without being also made a part of the record in that case.

FRANCIS H. KALES,
Of Counsel for the Complainant.
GEORGE PAYSON,
Counsel for Defendants.

(Endorsed:) Filed March 3, 1880. Wm. H. Bradley, clerk.

40 DEPOSITIONS TAKEN FOR COMPLAINANT.

Deposition of George H. Dickens.

Present, complainant, in person, and George Payson, appearing for the defendants; on this 18th day of January, 1878, at 3 o'clock p. m., at my office, in the city of Coldwater, Branch County, Michigan, the following persons appeared before me, Simon B. Kitchel, a notary public in and

for said Branch County, who, being by me first duly sworn, testifies as follows:

GEORGE H. DICKENS, sworn on behalf of complainant, testifies:

Q. 1. What is your name, age, residence, and occupation?

A. My name, George H. Dickens; I am 45 years of age; I reside in the city of Coldwater, Branch County, Michigan; by occupation a drayman.

Q. 2. If you have been in the employ of the Michigan; Southern and Northern Indiana Railroad, state when you commenced and how long you were so employed.

A. I was in that company's employ; I commenced work for this company here twenty years ago last fall, and worked for it till the fall of 1869.

Q. 3. In what department did you work for the company, and at what business during the time at Coldwater?

A. In the T-railroad shop, all the time I worked for the company.

Q. 4. Do you know of the use by said railroad company of any machine or machines for mending T-rails?

A. Yes, sir.

Q. 5. What kind of machines were so used? Give the names of the machines, if you know them, and if you do not know the names, describe them.

41 A. When I first went there to work, they used the common swedge-block; afterward used machines—a rack and pinion or lever-block, as it was called. Also used the Beebe & Smith machine.

Q. 6. During what years and at what places were such machines used?

A. Soon after I went there to work we put up two rack and pinion blocks; soon after there were two more put up.

Q. 7. Up to what year were the four rack and pinion machines used at Coldwater?

A. These four rack and pinion machines were used seven or eight years.

Q. 8. About what year or time was the Beebe & Smith block put in use in the shop at Coldwater; was it before or after 1865?

A. It was after 1865.

Q. 9. Was there another Beebe & Smith block put up shortly after the first was put up, or within a year?

A. There was, six months after, as near as I can recollect.

Q. 10. Were you at Detroit in June or July, 1865, and testified in a suit between said parties?

A. I was there and testified in such a suit, but don't recollect the year.

Q. 11. Were the four machines in general use up to the time the Beebe and Smith were introduced, and were they all generally used up to the time you stopped mending rails at Coldwater, in the year 1868, when the Bains rolls were put in operation at Elkhart for repairing railroad rails?

(Objected to as leading by defendant, and also as assuming a fact not proved.)

A. No, sir; they were not all of them in use up to the time we quit work here. Two of them were in use up to the time the shop stopped here in the fall of 1868.

Q. 12. Which two were in use at that time, the rack and pinion machines or the Beebe & Smith?

A. Two of each.

Q. 13. Were the rack and pinion machines and the Beebe & Smith machines all stopped at the same time in the fall of 1868?

A. They were.

Q. 14. What kind of fires were used in connection with the rack and pinion machines, and also in connection with the Beebe & Smith machine?

A. The rack and pinion machines we used furnaces; the Beebe & Smith machine, open fires.

Q. 15. Did you work at repairing T rails, and how long and what machines did you use?

A. I worked at repairing T rails; can't tell how long; I used all kinds of machines; I was at work at T-rail fire part of the time, and part of the time at the tool fire in the same shop.

Q. 16. How many rails were there mended on each machine?

A. I can't tell.

42 Q. 17. How would the amount of work actually done average as between the different kinds of machines in use by the said company at Coldwater?

A. It depends upon where they were used, whether at the furnace or at the open fire.

Q. 18. At which kind of a fire, whether furnace or open fire, could you heat and get out the larger number of rails in a day?

A. At the furnaces.

Q. 19. How many more rails could you get out when heated in a furnace than in an open fire, with the same amount of patching or mending, or mended in a day's work?

A. We could get out from a third to a half more in a furnace than in an open fire.

Q. 20. How many furnaces were in use in the shop at Coldwater, and the length of time so used?

A. There were two in use; I don't know that I can tell very near the time; three or four years, as near as I can recollect.

Cross-examination by GEORGE PAYSON:

Q. 21. What other machine have you used?

A. I used what we called the screw-block; the screw is used to move up the jaw. I believe I never used any other machine; I used what we called a screw-block at Coldwater.

Q. 22. When did you use the screw-block?

A. I can't tell what year; but it was before we got the Beebe & Smith rack and pinion.

Q. 23. Did you ever see what is known as the Michigan Southern or La Porte machine?

A. I don't think I did.

Q. 24. Did you ever even hear of such a machine before?

A. I guess not; not that I recollect of.

Q. 25. Did you ever use the Cawood machine?

A. No; sir.

Q. 26. Do you know what the Cawood machine is?

A. No, sir.

Q. 27. Did you ever see a machine in which the movable jaw was operated by a cam or cams?

A. I think not.

Q. 28. When did you first see the Beebe & Smith machine?

A. I can't tell exactly.

Q. 29. Please state as near as you can.

A. It was several years after we got the rack and pinion before we used those; can't tell how many.

Q. 30. Was it three years?

A. I don't know.

Q. 31. Was it two years?

A. I think it was longer than that.

Q. 32. Are you sure?

A. I am not sure, but think it was more.

Q. 33. How many rails did you use to mend a day at one fire?

A. That depended upon how much work there was upon them—from six to twenty.

Q. 34. How many feet did you mend in a day, to one fire?

43 A. Pretty good rails I think we could mend from eight to ten feet, perhaps more.

Q. 35. At which fire—the furnace or open fire?

A. We could do that at an open fire.

Q. 36. Which fire did you work at?

A. Both.

Q. 37. Did you use the furnace for other purposes than rail mending?

A. No, sir.

Q. 38. How many men had you at a fire?

A. Four part of the time; part of the time three.

Q. 39. How long did it take to heat the rail?

A. I don't know exactly—not long.

Q. 40. How long should you think?

A. From five to ten minutes, depending on the fire; if the fire got dirty it would take longer.

Q. 41. Was that in the furnace or open fire?

A. Well, we could heat them in that time in the open fire, and quicker in the furnace.

Q. 42. How long did it take in the furnace?

A. From four to seven minutes, along there; a little bit quicker.

Q. 43. How long did it take to get the patch on?

A. That depended upon how lively the men worked while it was hot; I could not tell.

Q. 44. About how long should you think?

A. I don't know.

Q. 45. Which took the longer, heating or patching?

A. Patching, I guess, generally.

Q. 46. You never looked at the watch to see how long it took to do either the heating or the patching, did you?

A. No, sir.

Q. 47. And you never measured the number of feet mended in a day, did you?

A. Yes, I have.
Q. 48. How often?
A. I could not say how often.
Q. 49. When?
A. At different times when I was at work at it.
Q. 50. How many feet did you use to mend in a day on rack and pinion?
A. From 8 to 10 feet, I should think. Of course we would not mend alike every day.
Q. 51. How many heats did you get in a day at one fire?
A. I don't know.

Redirect:

Q. 52. In your direct examination you were asked as to the amount of work done where you used a furnace or open fire per day. You answered that you could get out from one-third to one-half more rails with the same amount of work on them in a furnace than at an open fire. In your cross-examination you state that you done 8 or 10 feet a day at the open fire and the same amount at the furnace. What are the actual facts as to the different kind of fires in the amount of work done at each?
A. If I did answer in that way I made a mistake, because
44 we can certainly mend more in a furnace than in an open fire, for we can heat quicker and make a longer heat—put on a longer patch to a heat.

Recross-examination:

Q. 53. How many heats could you take in an hour, including the patching?
A. I don't know.
Q. 54. How much did the patches average in length?
A. I don't know. They would run from 3 inches to 15—perhaps to 30, and sometimes more.
Q. 55. How long should you say it took to get up a heat in a furnace?
A. From four to seven minutes—somewhere along there—as near as I can tell.
Q. 56. Didn't it take twice as long as that?
A. No, sir.
Q. 57. Are you sure?
A. Yes, I am pretty sure. If I thought it took twice as long I should not have said from four to seven minutes.
Q. 58. Can you swear that it did not take from ten to fifteen minutes to get a heat?
A. I can.
Q. 59. How do you know, as you never measured the time?
A. I could tell whether it was five minutes or fifteen, I am sure.
Filed Jan'y 22, 1878.

GEORGE H. DICKENS.

Deposition of John P. Stuart.

JOHN P. STUART, being duly sworn, testifies:
Q. 1. What is your name, age, residence, and occupation?

A. John P. Stuart; age, 47; residence, Coldwater; am track-master.

Q. 2. If you have been in the employ of the Michigan Southern & Northern Indiana Railroad Company, state when you commenced, and how you were so employed, and where.

A. Yes, sir; commenced 22 years ago the 15th of July last; eleven years on what is called the Air Line, from Edgerton to Goshen, and I have been on what is known as the Coldwater division for some 11 years, I think; the first two years of the Coldwater division would be from Adrian to White Pigeon; and then about a year it went from Hudson to White Pigeon; since then from Hillsdale to Elkhart.

Q. 3. Do you know of the use by said R. R. Co. of any machine or machines for mending T rails?

A. Yes, sir.

Q. 4. What kind of machines were so used on the different divisions you had charge of, and at what places?

A. There were two different kinds used; one kind was called the Smith & Beebe machine, the other kind was called the Ball block; we used
45 the Smith & Beebe at Coldwater, and the Ball block or rack and pinion also there; we used the Smith & Beebe at Kendalville, Indiana—one of each kind; at Hudson we used what is called the Smith & Beebe, and that is all.

Q. 64. During what years were each of said machines used at Kendallville and Coldwater?

A. I could not say what year we commenced; it was 1861 or '62, at Kendallville. I can't remember dates.

Q. 65. Did you commence repairing rails at Kendallville before or after they commenced at Wauseon on the same line of road?

A. I am quite sure we commenced the same year and same month.

Q. 66. What kind of machine was first put in use there?

A. Smith & Beebe.

Q. 67. How soon thereafter was the rack and pinion machine put in use?

A. About six months.

Q. 68. Were both of those machines used generally in repairing rails up to the time they started the Bain's rolls at Elkhart in the fall of 1868?

(Objected to by defendant as leading, and assuming a fact not proved.)

A. They were used during my time there. I left there March 15th, 1865.

Q. 69. How many machines and what kind did you find at Coldwater when you came there in 1865 or '66?

A. I found four machines. One of them I am sure was a Smith & Beebe. I am not sure whether there were more than two of the rack and pinion.

Q. 70. Didn't you have a Beebe & Smith machine put up at Coldwater soon after you come here?

A. Yes, sir.

Q. 71. How long after.

A. I think it was about a month.

Q. 72. Then there were two rack and pinion and two Smith & Beebe in use?

Yes, sir.

Q. 73. What kind of machines were used at the furnaces and at the open fires?

A. The rack and pinion were used at the furnace, and the Smith & Beebe at the open fire.

Q. 74. Did you have the Beebe & Smith machine put in the place where one of the rack and pinion had been used?

A. I think I did.

Q. 75. Was there any other place on your divisions from 1862 to 1868 or '9, except those already stated, where they repaired T rails?

A. No, sir.

Q. 76. Do you know when the Bain's rolls were put up at Elkhart for repairing rails?

A. I don't remember the date; I remember the time well enough.

Q. 77. About what time, in your best judgment, was it?

A. In the fall of 1868.

Q. 78. Did all the shops stop repairing rails on your division in the fall of 1868?

A. Yes, sir.

Q. 79. How many rails were there mended on each machine in your division?

A. Oh, land! I could not give you any idea.

Q. 80. How would the amount of work actually done average as between the different kinds of machines used by said company on your divisions?

A. I could not say that there was any difference; I don't know that there was.

Q. 81. Did you ever work at mending rails?

A. No, sir; I have mended rails but never worked at it.

Q. 82. In which kind of a fire, a furnace or open fire, is the best for heating and mending T rails?

A. Well, I should have to answer that by saying that I had some men that couldn't work at a furnace that could work at an open fire, and some that could work at an open fire that could not run a furnace.

Q. 83. Were the two rack and pinion machines and the two Beebe & Smith machines in general use up to the time that the Bain's rolls started at Elkhart after you came here, at the time they had two Beebe & Smith machines in use?

A. Yes, sir.

Q. 84. Were you ever a witness between the parties to this suit; if so, when and where?

A. I don't know as to that; I was called to Chicago once as a witness by the company to give my testimony in regard to a rail block, in 1874, I think.

Cross-examination:

Q. 85. Did you ever see a Cawood machine in use anywhere; that is, a machine where the movable jaw was moved by cams?

A. Never saw one.

Q. 86. Did you ever see the machine known as the La Porte block or Michigan Southern?

A. I have seen the block, but never saw it used.

Q. 87. When did you first see it?

A. The first time I noticed was about two years ago, in the Elkhart shop.

Q. 88. When the Bain's rolls started did the company stop mending rails on the Beebe and Smith machine and rack and pinion?

A. Yes, sir; they did on my division.

Q. 89. How was it on the other divisions?

A. I could not say as to that.

Q. 90. When you first came to Coldwater, do you know now how many Beebe and Smith machines were there?

A. I am not positive of but one.

Redirect examination:

47 Q. 91. Where was the Beebe and Smith machine shipped from that you put up after coming to Coldwater, and when?

A. It was shipped from Adrian, and put up the last of April, 1875.

Q. 92. Where did the machines come from that you put up at Kendallville?

A. I ordered them from Adrian, and am quite sure they came from Adrian.

Q. 93. Was there any other place where they made these machines except Adrian, east of Elkhart?

A. No, sir.

JOHN P. STUART.

Filed Jan'y 22, 1878.

Deposition of James Redmond.

Depositions of witnesses sworn and examined on behalf of the complainant in the above-entitled cause, before Norman Geddes, a notary public at Adrian, in the State of Michigan—the complainant appearing in person and the defendant being represented by his attorney, George Payson, esq.

JAMES REDMOND, a witness produced, sworn, and examined by and on behalf of the complainant, says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is James Redmond; I am now fifty-one years of age, and my residence is Adrian, Michigan, and my occupation is foreman in railroad blacksmith-shop at Adrian.

Q. 2. State when you commenced and how long you were so employed, and in what department for the Michigan Southern and Northern Indiana Railroad Company.

A. I was first employed on the road as blacksmith at Adrian in the early part of 1854. I continued to work as blacksmith in the car department and road work until in 1864, when I was placed in charge of blacksmith shop, with exception of 3 or 4 months' absence, and have been employed as foreman in the blacksmith shop, car work and road department and T-rail shops ever since, or until a portion of this work was removed from here.

Q. 3. Do you know of the use by said railroad company of any machine or machines for mending T railroad rails?

A. Yes.

Q. 4. What kind of machines were so used? Give the names of the machines if you know them, and if you do not know the names describe them.

A. There were two kinds of blocks used—what we call T-rail blocks; one machine was known as the rack and pinion machine, and the other as the Smith and Beebe block.

48 Q. 5. During what year and at what place were such machines used?

A. The rack and pinion machine was first put up in Adrian late in the fall of 1856; they were new; there were four of these; those four were run most of the time until the summer of 1869, I think, with exception of some breakages of machinery, &c.; the Smith and Beebe block was put in use in the summer of 1862, and run till some time in the summer of 1867; they were not all discontinued at same time; some were discontinued earlier than others; am not positive when they were all discontinued; we closed them all down some time in 1867, the latter part of the season; there were T-rail blocks used at La Porte, Elkhart, Coldwater, Hudson, one or more there at Monroe; these I know positively were used, for I was in the shops and saw them used; they were also used at Adrian.

Q. 6. How many rails were there mended on each machine?

A. I don't know.

Q. 7. What time did D. O. Connor leave the employ of the railroad co.?

A. In the summer of 1867.

Q. 8. Wasn't it July 13th, 1867, as per date on your books, looked up by you and myself on Wednesday of this week?

(Question objected to as leading, and as calling for evidence that can be better supplied by the books.)

(Subject to objection witness answers:) My books show it was in July, some time in July; am not confident as to the exact date.

Q. 9. Were some of the Beebe and Smith machines discontinued at the time Dennis Brennan took a contract for making switches in the spring of 1865, in April, 1865, and how many?

(Question objected to as leading, and as assuming a fact not proved.)

(Subject to the objection witness answers:) There was one discontinued when Brennan took contract to make the switches. I don't remember the time when he took the contract, but think it was in 1865, at some time.

(Same objection by defendant's counsel to the answer last above written.)

Q. 10. What would be the average time the four Beebe & Smith machines were in use mending T rail from August, 1862, up to the summer of, or in July, 1867, when they were all discontinued?

A. I couldn't give the exact time. I couldn't give the definite average time; have no means of giving the exact time.

Q. 11. Did not you tell me on Wednesday of this week, to-day being Friday, that you thought about four years would be a fair average

49 time the four machines were used in mending T rails?

A. I think I said four years would be about an average; I wasn't just certain about the time.

Q. 12. What kind of fires were used with the rack & pinion blocks, and the Beebe & Smith blocks, at Adrian, furnaces or open fires?

A. The rack & pinion had furnaces; the Smith & Beebe had the open fires.

Q. 13. How would the amount of work actually done average as between the different kinds of machines used by said company at Adrian?

A. The four furnaces would heat the rail faster; we could do more with them than with the open fires; I expected my furnaces to weld from one-half to two rails a day more than the open fires; I mean each furnace.

Q. 14. At what places were the company mending rails from 1862 up to 1868 or '9, at the time they discontinued the shops for repairing by hand, and the number of machines at each place?

A. I don't know.

Q. 15. Was the shop discontinued at Hillsdale before 1862?

A. Yes.

Q. 16. And Sturgis also?

A. I don't know.

Q. 17. Were all the machines for repairing T rails for the road east of Elkhart made at Adrian?

(Question objected to as leading.)

(Subject to objection, witness says:) I don't know.

Q. 18. Where were the supplies furnished by the company for all their lines east of Elkhart for machines to mend T rails?

A. There were some supplies furnished at Adrian, I know; I furnished them myself.

Q. 19. Was there any other place than Adrian where there were any blocks made for mending T rail east of Elkhart, Ind.?

A. Yes. On reflection, I wish to say I don't know whether there was or not.

Q. 20. Would the books of the company, kept at Adrian, and in what department, show the time and date such machines were made, and did you have charge of that department where the machines were made?

A. I think the books in my department show when one machine was shipped, with three sets of jaws to it, from Adrian to another point.

Q. 21. Did the company keep the account of the number of blocks made in any department at Adrian? If so, in what department were they kept?

A. I think they did; they were kept by the car department and charged over to the chief engineer's department.

Q. 22. Do you know of any other machine being used on said road by said company than the rack and pinion, or Whitcomb, as it is
50 sometimes called, and the Beebe & Smith machines, since 1862?

A. I know there was another block used in La Porte.

Q. 23. What was it called?

A. The bayonet block or Michigan Southern.

Q. 24. Do you know when that was made or used?

A. I don't know when it was made; I think it was used in 1863–'4; somewhere along there.

Q. 25. Did you ever see it in use?

A. I saw the block in the shop ready for use; I think I never saw it used; I may, but if so, have forgotten it.

Q. 26. How many did you ever see of them; more than one?

A. I don't recollect how many there were.

Q. 27. How many machines did they have in Monroe from 1862 up to the time they discontinued mending rail in the fall of 1868?

A. They had two machines at Monroe, but I don't know that they were there all that time in use.

Q. 28. What was the names of those two machines?

A. They were the Smith & Beebe machines.

Q. 29. Was there any other place besides Monroe, east of Adrian, where they mended rails after 1862?

A. Not to my knowledge.

Q. 30. Would you have been apt to know had there been?

A. I would.

Q. 31. Were you ever examined as a witness between said parties? If yea, state when, where, and how many times on the part of the defendant.

A. I was examined at Chicago; the exact time I can't give; think it was in 1872; was so examined twice, I think.

Q. 32. At what time was you so examined the last time?

A. It must have been some two years after, or in 1874.

Q. 33. What were the principle places in which rails were repaired after 1862 on said road?

A. I answered this before—at La Porte, Elkhart, Coldwater, Adrian, and Monroe.

Being cross-examined by defendant's counsel, witness deposes as follows:

Q. 34. What is the difference between the furnace and the open fire?

A. The furnace is composed of a cast-iron box, with doors on each end, and bricked up on inside with fire-brick. The fuel we use for that furnace is coke; we shut the wind or blast in as close as possible, and so get a greater heat. The open fire is a plain elevation of about 20 inches high, and about 4 feet square, or near that. The fuel we use in these would be Blossburg coal. It may be a common blacksmith's forge. The
51 fire is constructed a little different. There may be more coal used.

Q. 35. Did you ever see any Cawood machines used on this road?

A. I may have, but don't know them by that name.

Q. 36. Did you ever see any machines in use on the road where the movable jaw was operated by cams?

A. I saw the machines, but I think not in use. I think I saw two old ones out of use; don't know how long ago; it must be a long time ago.

Q. 37. How came they to go out of use?

A. They weren't considered as good as the other blocks. That is my opinion.

Q. 38. When were the four rack and pinion blocks first used at Adrian?

A. They were first started in 1856, late in the fall. Not much work was done on them until in 1857.

Q. 39. There wasn't much work done on them in 1857, was there?

A. I think there was considerable done in 1857.

Q. 40. They were not all used all the time in 1858, were they?

A. I think they were pretty generally used in 1858. There was no year when they were used all the time. Some of the time men would be sick, and sometimes the machines would want repairing.

Being re-examined by complainant, witness desires to make the following correction in his testimony:

I was employed as foreman from October, 1864, until the consolidation with the Lake Shore of the *the* Michigan Southern and Northern Indiana Railroad Company, and after the consolidation I remained in employ of consolidated companies until this time.

JAMES REDMOND.

Subscribed and sworn to before me this 18th day of January, 1878.

NORMAN GEDDES,
Notary Public.

Filed Jan'y 22, 1878.

Deposition of James Haverly.

Deposition of two witnesses, produced and sworn before me, a notary public within and for the county of La Porte, in the State of Indiana, at my office, in the city of La Porte, on the fourteenth day of January, 1878. The depositions are taken on behalf of the complainant in a certain suit now pending in the United States circuit court for the
52 northern district of Illinois, wherein Samuel H. Turrill is complainant and the Michigan Southern and Northern Indiana Railroad Company and others are respondents.

JAMES HAVERLY, a competent witness, being first duly sworn, deposes as follows:

Interrogated by the plaintiff:

Q. 1. What is your name, age, residence, and occupation?

A. James Haverly; am thirty-eight years of age; I live in La Porte, county of La Porte, Indiana; my present occupation, city marshal.

Q. 2. If you have been in the employ of the Michigan Southern and Northern Indiana Railroad Company, state when you commenced, and how long you were so employed.

A. Yes, sir; I was in their employ; I commenced in October, '57, and continued off and on at the La Porte shops here until '67, I think.

Q. 3. In what department was you employed during the time above stated by said railroad?

A. In the T-rail shop.

Q. 4. Do you know of the use by said railroad company of any machine or machines for mending T rails?

A. Yes, sir.

Q. 5. What kind of machines were used? Give the names of the machines.

A. Well, there was what we called the Abbey block, the Cawood block, the Beebe and Smith, and the bayonet vise.

Q. 6. During what years were these machines used at La Porte? State as near as you can, and the number of each.

A. There was one Abbey block; that block was in use, probably, in the neighborhood of two years. Well, it would have been part of '57 and all of '58 and a part of '59 to make the two years, although I am not positive about its being two years. The Cawood block was in use when I came there in '57, and its use was continued during all of the time that

I worked there. There were two of them, commencing in '57. Then there were at different times, I cannot state exactly when, two or three added. Then there were one or two of the bayonet vise machines put in use along about in the neighborhood of '65, I guess. Now, I can hardly explain in answer to that question about the Beebe and Smith blocks. There was one Beebe and Smith block in use for a time, but I think it was replaced by a bayonet-vise machine.

Q. 7. How many machines were in use at the La Porte shop, and what kind of machine, from 1862 up to the time you left in '67?

53 A. I think there were seven machines; four or five of the Cawood pattern, one or two of the bayonet vise, and one of the Beebe and Smith. I am not clear as to whether there were four or five of this pattern, neither am I clear as to there being one or two of the bayonet vise.

Q. 8. Look at the model marked "Exhibit A—E. B. G. notary public." State whether that fairly represents the machine you call the Cawood, operated by a rack and pinion. (To this question the respondent, by John B. Niles, objects, as leading and improper.)

A. Yes sir.

Q. 9. Please describe the machine you call the Cawood, and how it is operated, that was used in the shop at La Porte?

(Objected to as merely in effect asking the witness to describe the machine which is placed before him.)

A. It was a cast-iron block with grooves, representing the shape of one side of a T rail, also an opening in the shape of a T rail to admit of the rail being placed therein so as to hold it to its original shape, and acting with one sliding or shifting jaw (we used to call them), moved backward and forward by the means of a ratchet and a cog.

Q. 10. State, if you know, when the bayonet-vise machine was put in operation at the La Porte shops.

A. No, sir; I don't know when; but I know that is it was put there; I think between '63 and '65.

Q. 11. Did you go to Detroit as a witness between the same parties in the year 1865, in June?

A. I went to Detroit as a witness, I think in '65; don't remember what time in the year.

Q. 12. Did you see a machine there at that time which you call a bayonet-vise machine, and if so, was that the first machine ever made at La Porte, and how long was it finished before you went to Detroit in that year, in eighteen hundred and sixty-five?

A. I am not sure that I seen the machine there. I think it was there. I think that was the first machine that was made; there was one made that was said to be made for that purpose a short time before the trial was to come off at Detroit.

Q. 13. When was the Beebe and Smith machine put in use at the La Porte shop, as near as you can state?

A. Well, that was in the neighborhood of sixty-three to five—along there somewhere.

Q. 14. State whether the Beebe and Smith, and the bayonet-vise machine, and the Cawood, or rack and pinion, sometimes called the Whitcomb machine, were all equally in use while you were there? If not, state what kind was used the most.

54 A. They were not equally in use during the time I was acquainted with the shop. The Beebe and Smith was used but very little. The bayonet vise was used all the time from the time it was put in use, except the time it was away to Detroit during the trial, as near as I can remember. And the Cawood block was in use from the time I first went to work in the shop until I quit.

Q. 15. How many Cawood blocks were in use from eighteen hundred and sixty-two until you left the shops in '67?

A. Four or five.

Q. 16. How many rails were mended on each machine?

A. I can't say.

Q. 17. How would the amount of work actually done average as between the different kinds of machines in use by said company?

A. The men were expected to do the same amount of work on each of the machines that were actually in use. The Cawood block and the bayonet vise had the preference over the Beebe and Smith by the men using them. The work averaged about the same on those two.

Q. 18. Was the number of rails that was repaired on each machine kept separately at the time you were at work in the shop?

A. The foreman of each fire kept an account of the number of rails repaired at his fire.

Q. 19. To whom did he report the amount of work done on each machine?

A. To the foreman in the shop.

Q. 20. Who was the foreman of the shop at the time you was there?

A. Abbey was foreman a short time in the beginning; I don't remember his given name, but I think it was Truman Abbey; and William A. Williams, I believe, was the foreman the balance of the time.

Q. 21. Was there a man that used to work there by the name of Andrew Bearup?

A. Yes, sir; Andrew Bearup was master mechanic of the locomotive shop here at La Porte.

Q. 22. Are he and William A. Williams dead or living?

A. They are both dead.

Q. 23. Do you know at what time the Beebe & Smith machine was supplanted by the bayonet vise and put in its place?

A. No, sir; I have an indistinct recollection of the change, and that is all. I don't remember the time.

Cross-examination by JOHN B. NILES on behalf of defendant:

Q. 24. Have you any means of definitely fixing the time when the Beebe & Smith machine was first brought to the shop?

55 A. No, sir; not definitely; it was one among the last that came there; it and the bayonet vise were brought there about the same time, as near as I can remember. I think the Beebe & Smith came first; if there was two of the bayonet vise, they did not come at the same time. My impression is there was two, but I am not positive only as to one; but I think that one took the place of the Beebe & Smith, if there was two of the bayonet vise.

JAMES HAVERLY.

Filed Jan'y 22, 1878.

1966——3

Deposition of Norman D. Andrews.

NORMAN D. ANDREWS, a competent witness, being next duly sworn, deposed as follows:

Q. 1. What is your name, age, residence, and occupation?

A. N. D. Andrews; fifty-seven years old; La Porte, Indiana; occupation, a machinist.

Q. 2. If you have been in the employ of the Michigan Southern and Northern Indiana Railroad Company, state when you commenced and how long you was so employed.

A. I commenced on the fifteenth of April, 1857, and continued with them until seventy-one, or somewhere along there.

Q. 3. Do you know of the use by said railroad company of any machine or machines for mending T rails?

A. I do.

Q. 4. What kind of machines were so used? Give the names of the machines, if you know them, and if you do not know the names describe them.

A. The Cawood machine, the Beebe and Smith, and the machine they called the bayonet.

Q. 5. During what years and at what place were such machines used?

A. They were used from the year eighteen hundered and fifty-seven to eighteen hundred and sixty-nine, at La Porte.

Q. 6. How many, and what kind or kinds? State separately as to machines which were used at La Porte from 1862 to 1869.

A. As near as I can recollect there was four or five of the Cawood machines, and one or two of the Beebe and Smith, and one of the bayonet machines; at one time there was seven machines, about in the year sixty-three or sixty-four; five of them were the Cawood machines.

Q. 7. How many rails were there mended on each machine?

A. I don't know.

Q. 8. How would the amount of work actually done average as
56 between the different kinds of machines in use by said company?

(Objected to, because it doesn't appear at all that the witness had sufficient means of knowledge to give an opinion. Question withdrawn.)

Q. 9. What were your duties while you were connected with said railroad company from the commencement up to the time you left?

A. From 1857 to 1867, I think, I was foreman in the machine shop; about the rest of the time I was there I was master mechanic.

Q. 10. Did you have anything to do with or in the shops where the T rails were repaired? If so, state what it was.

A. In 1869 the T-rail shop was under my charge until they moved it in the fall of sixty-nine.

Q. 11. Did you have anything to do with it before sixty-nine—with the T-rail shop?

A. Not directly.

Q. 12. Didn't you have charge of it while William A. Williams was absent, some time between the years sixty-three and sixty-five, or at the time he went to Europe?

A. At the time he went to Europe I had charge of it—about a year.

Q. 13. How would the amount of work actually done average, as be-

tween the different kinds of machines in use by said company, while you had charge of the T-rail shop?

A. I think the Beebe and Smith machine wasn't kept running as regular as the others; haven't any idea about it, only as I have answered the question.

Q. 14. Would the men working do as much on the Cawood machine, or more, than the men working with the Beebe and Smith or bayonet machines?

A. I know but very little about it.

Q. 15. Were the patterns of the Cawood and bayonet vise made in the shops at La Porte, and the machines made from them?

A. They were.

Q. 16. About what time was the bayonet-vise machine first made?

A. I think it was made in the winter of 'sixty-five.

Q. 17. How many of them were used in said shop up to the time of removing the shops in 1869?

A. I am not positive as to whether there was one or two—one, I think.

Q. 18. How many of the Beebe and Smith were used, and during what time between 1862 and 1869?

A. There was only one that I am positive of; as to others, I cannot say at what time they were used—I couldn't say, either.

Q. 19. If you know, state which kind of machine men like best to work on in repairing rails.

(Objected to on the ground that it is immaterial, and only hearsay, if anything.)

57 A. Between the Cawood and the Beebe machines, the Cawood was preferred by the men; with the bayonet machine, I haven't any idea whether there is any difference or not.

Q. 20. Did you know William A. Williams and Andrew Bearup at the time they were at work in the T-rail shops at La Porte?

A. I knew Mr. Williams at the rail shop. Mr. Bearup never worked in the rail shop; he was master mechanic of the machine shop and locomotive department.

Q. 21. Do you know if they are dead or living?

A. They are both dead.

Cross-examined by JOHN B. NILES:

Cross-q. 1. What means have you, if any, of fixing your recollection definitely as to the number of either kind of machines? Have you any means?

A. As foreman of the shops I had the supervision of the building of all these machines that were built after 1857.

Cross-q. 2. Is that your principal or only means?

A. I saw the machines at work nearly every day.

Cross-q. 3. Has anything occurred since that time to occasion you to think of or definitely remember the exact number of each?

A. I don't know that there has.

Cross-q. 4. Is your recollection equally distinct as to the number of each of the different kinds of machines used?

A. Won't you read my other answer? I think they are not very distinct.

Cross-q. 5. Have you any definite recollection as to whether there was one or two of the bayonet vise which was used?

A. I haven't, but I think there was two of them made.

Cross-q. 6. When you said in a previous answer that there were four or five of the Cawood, did you mean to follow it by saying positively that there were five of that kind—or, if you did say so, was it a slip of the tongue?

A. I think at one time there were five Cawood machines there in the shop, but they might have been replaced by two Beebe machines, and one bayonet machine to take the place, I should have said. I mean to say that at one time there were seven machines in the shop, and five of them were Cawood machines, to the best of my recollection.

Cross-q. 7. When was that time that you think there were five Cawood machines in the shop?

A. I think it was in 1863 or 1864.

Cross-q. 8. How many of the other kinds do you think there were there then?

58 A. I said there was five Cawood machines there then; there might have been two Beebe machines there at that time; I couldn't say positive.

Cross-q. 9. Are you able to remember any more definitely as to the number of one particular kind than of another?

A. Not particularly so, that I know of.

NORMAN D. ANDREWS.

Filed Jan'y 22, 1878.

Deposition of Samuel H. Turrill.

Testimony taken before Henry W. Bishop, master in chancery of said court, Tuesday, the 26th day of February, A. D. 1878. Present, L. L. Bond, esq., of counsel for the complainant, and George Payson, esq., of counsel for the defendants.

And the complainant, SAMUEL H. TURRILL, a witness on behalf of the complainant, being first duly sworn, was examined in chief by Mr. BOND, and deposes and says as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. Samuel H. Turrill; of full age; Chicago; principal occupation is litigation with railroads on patent rights; Cawood's patent swage-block.

Q. 2. At what time did you try your suit against the Michigan Southern & Northern Indiana Railroad Company, at Detroit, Michigan?

A. The first suit was tried the last of June, and run into July of the year 1862.

Q. 3. Who at that time was superintendent of the railroad company?

A. John B. Campbell.

Q. 4. Did he at that time, or about that time, furnish you with a statement of the number of machines used by the said M., S. & N. I. R. R. Co. for mending rails. If so, state what has become of such statement.

A. He did. It was burnt up in my office, in McCormick building, in the great fire of 1871.

Q. 5. How many or what number of machines for mending rails, and

what kind of machines, were shown by the statement of said Campbell to be in use by the M. S. & N. I. R. R. Co. at that time?

A. Seventeen; two of Beebe and Smith, fifteen of the Cawood, as he called them.

Q. 6. Do you know how many machines for mending rails there were in use in 1861, at La Porte, Indiana. If so, state the number and the particular date.

59 A. In December, 1861, there were six of the rack and pinion or Whitcomb machines in use at La Porte. I think it was the 18th day of December I was there and saw them.

Q. 7. Have you been recently at Adrian, Michigan? If so, state when, and what you ascertained relative to the making or using at that point of machines for mending rails; also state from what sources you derived your information, if any.

A. I was there in January, 1878, about the middle of the month. Mr. James Redmond, who is and has been for some time foreman of the blacksmith shop and T-rail shop when they were mending rails, showed me his books, and the dates when the machines were put in use and discontinued at Adrian. They had four rack and pinion or Whitcomb machines from the fall of 1856, and were discontinued in the month of October, 1869. The Beebe and Smith machine was put in operation, four of them, August, 1862. Daniel O'Connor commenced working on one of them August 1st, 1862. He worked on it until July 13th, 1867. Two of them stopped April 17th, 1865, as stated by Mr. Redmond, when Mr. Brennan commenced work at switches, and one had stopped prior to that date. These facts I ascertained from Mr. James Redmond, he showing me his books and going over them with me, and telling the names of the men that worked on the different machines, and the time they quit work.

By Mr. PAYSON. Defendants object to the above answer as hearsay and not the best evidence, and therefore incompetent.

Q. 8. While examining the books with Mr. Redmond at Adrian, did you ascertain whether or not any machines for mending rails were shipped from that point to one J. P. Stuart. If so, state how many machines were shown to be shipped to him, and at what time or times.

(Same objection as to last answer.)

A. Mr. Redmond showed me his book where he shipped one machine and three sets of jaws to J. P. Stuart, April 12th, 1866.

Q. 9. What position or office did Stuart hold at that time?

A. In his deposition he stated he was road-master; outside of that I do not know. That deposition was given in January, 1878.

Q. 10. To whom or to what company did the books which you examined with Mr. Redmond belong, and what divisions or departments

60 of the business did the books in Mr. Redmond's possession cover?

A. I examined the books in Mr. Redmond's office at Adrian; they were books belonging to the Michigan Southern and Lake Shore Railroad, as kept by Mr. Redmond, having the names of all parties working in the blacksmith shops and T-rail shops from 1856 up to the time that I was there in January, 1878. The books were kept by Mr. James Redmond, as I understood him to say, from the time he commenced as foreman of said shops, in 1864.

(Same objection by defendants as to the seventh answer.)

Q. 11. When did you become aware of or know of the existence of a machine for mending rails known as the bayonet vise machine, or Michigan Southern machine?

A. In June, 1865, at Detroit. It was at my second trial of the suit against the M. S. & N. I. R. R. Co.

Q. 12. So far as you know, how many bayonet vise machines were ever made or used?

A. Three; one on the Illinois Central, made in 1867; one I saw at Detroit in June, 1865; one I saw at Elkhart, January, 1878.

Q. 13. What appearance of use did the machine which you saw in Detroit, in 1865, have?

A. It was a new machine; had no appearance of but very little use, if any.

Q. 14. Where was it?

A. It was on the sidewalk by the post-office and United States court rooms, at Detroit. It was so large and heavy that they could not take it up into the court-room.

Cross-examination by Mr. PAYSON:

Q. 15. Did the M. S. & N. I. Railroad ever use any Cawood machines, strictly so called?

A. Not to my knowledge.

Q. 16. All the so-called Cawood machines used on that road were rack and pinion machines, were they not?

A. They were, so far as my knowledge goes, operated by rack and pinion, sometimes called rack and pinion, and sometimes Whitcomb machines.

SAMUEL H. TURRILL.

Subscribed and sworn to before me this 24th day of February, A. D. 1878.

H. W. BISHOP,
Master in Chancery of the Circuit Court of the United States for the Northern District of Illinois.

Deposition of Lyman Beebe.

Testimony taken before Henry W. Bishop, master in chancery of said court, Friday, the 4th day of January, A. D. 1878; present, Samel H. Turrill, the complainant, in person, and also L. L. Bond, esq., of counsel for the complainant, and Gearge Payson, esq., and Judge Niles, of counsel for the defendants, and the witness below named.

LYMAN BEEBE, a witness on behalf of the defendants, being first duly sworn, was examined in chief by Mr. NILES, and deposes and says as follows:

Int. 1. Please state your name, age, residence, and occupation.

A. Lyman Beebe; my age is 72 the 14th day of last June; my residence is Penfield, Monroe County, New York State.

Q. 2. Please look upon the model now shown you, marked "Exhibit Beebe & Smith Block," and state briefly what knowledge you have of the

machine represented by it, and what connection you have had with the machine.

A. Well, that model represents the machine patented by Beebe & Smith. The knowledge I have had of it is it worked to perfection, gave satisfaction wherever it was used. I have used them in shops where I had charge of the shops in different places. I was the owner of the patent and sold the patent, sold rights, sold machines, manufactured and sold.

Q. 3. Are you one of the original patentees?

A. I am.

Q. 4. Was you ever employed by the Michigan Southern and Northern Indiana Railroad Company; if so, at what place, and in what capacity, and during about what time?

A. I was employed in the service of the Michigan Southern and Northern Indiana Railroad Company, at Elkhart, Indiana, commencing in the year 1858, the fall of 1858, and continued there until about 1862—1861 or 1862, I could not say positive—it is 1861, I am very confident. I was foreman of the shop there for repairing T rails and other work.

Q. 5. Did you ever sell to that company a machine, any machine represented by the model; if so, when and under what circumstances
62 did you make to them the first sale of such a machine?

A. I sold them a machine in the year 1858; some time, I should think, in August, in the year 1858; carried it to them from Michigan City over to La Porte in a wagon, which is ten miles across from one road to the other. A man they called Dr. Williams was division superintendent, whose office was at La Porte, and I delivered it to him, and he paid me for the machine and the right of use of the machine, but not to manufacture at that time.

Q. 6. Did you afterwards make any other sale to that company of any machine, and of any right to make and use machines; if so, when, as nearly as you can remember, and under what circumstances, and what rights did you so sell?

By Mr. BOND: So much of the question as refers to the right to make objected to as immaterial.

A. I sold them a machine and the right to manufacture and use for the Michigan Southern and Indiana Northern Railroad—a machine and the right of manufacturing and using it on that road. It was in the year 1859, I think. Yes, it was in the year 1859.

Q. 7. You say the right to manufacture and use? What right did you sell them; please state more definitely.

By Mr. BOND. Objected to.

A. I sold the right of manufacture and use of all they felt disposed to manufacture and use on the road or roads, to the Michigan Southern and Northern Indiana Railroad, with its branches as I supposed.

Q. 8. Are there any circumstances by which you are enabled to fix the time with some degree of certainty; if so, what are they?

By Mr. BOND. Objected to as immaterial.

A. Well, I don't know as I can fix the time any nearer. It was in August, I think, or September, in 1859, I sold them the right to manufacture and use.

Q. 9. At what place was the sale consummated?

By Mr. BOND. Same objection.

A. It was at Toledo.

Q. 10. Who acted on behalf of the railroad company in the negotiation?

(Same objection.)

A. John D. Campbell, general superintendent of the road.

Q. 11. Who else, if any one, was present when the sale was made?

(Same objection.)

A. Well, my partner was there, George F. Smith, and I don't know of any one else right at the time the sale was made, but John D. Campbell; I have thought, and think yet, that Charles Paine, division super-
63 intendent of the western division, was in the room while I was there, and knew what our business was there.

Q. 12. You speak of the sale of the right to make and use it for the road and its branches; what branches were there in existence at that time?

(Same objection.)

A. There was the old line and the new line; what was called the air line and the old line road; there was the Jackson branch, and the branch from Toledo to Monroe, I think; there was the Three Rivers branch.

Further direct examination by Mr. PAYSON:

Q. 13. What was the consideration paid for this last license?

(Same objection.)

A. The sale to the company?

Q. 14. Yes, sir.

A. I don't recollect exactly, for we did not get what we calculated to charge the company; at that time I was an employee on the road, and I felt disposed to sell to them very cheap on that account, and I think we got some $300 for the right of manufacturing and using for their road.

Q. 15. What else did you sell them at the same time?

(Same objection.)

A. I sold them a machine; one with it at the same time.

Q. 16. What did Mr. Smith have to do with it?

(Same objection.)

A. He was present and did the business with us, and had the deed to sign with me. He had one-half of the profits, or one-half of the avails of the machine.

Q. 17. When was this patent obtained?

(Same objection.)

A. From the Patent Office?

Q. 18. Yes, sir.

A. It was patented in June, 1857.

Q. 19. Who signed the license?

(Same objection.)

A. I signed it myself, and George F. Smith signed it, who was present, and we had him sign his own name; I recollect that.

By Mr. BOND. This class of testimony is objected to for the further reason that it is an attempt to prove the contents of a written document without accounting for its loss or absence.

Q. 20. To whom did you deliver the license?

(Objected to.)

A. John D. Campbell, superintendent.

Q. 21. Did you keep a copy of it?

(Objected to.)

A. I don't recollect; I think not; made a minute of it in a book, probably, as I had one other machines; where I would sell a machine, why, I would make a minute of it.

Q. 22. Do you know what has become of the original?

(Objected to.)

A. The original letters patent?

Q. 23. The original license that you gave them?

(Objected to.)

A. I do not.

Q. 24. Have you ever seen it since?

64 A. No, sir.

Q. 25. Please state as nearly as you can the contents of said writing.

By Mr. BOND. Objected to for the reasons stated.

A. Well, it was made out in the form of a deed; we deeded to the railroad company the right to manufacture and using of all the machines necessary for their use on the road; I cannot work it off; it has gone from me; all the rights and privileges in it that I had myself of the whole; Mr. Campbell had an attorney there to make out the deed; it was just read over to me, and we signed it, and let them have it; I don't recollect now its contents.

Q. 26. Please state whether it conveyed the right to make and sell to other parties.

By Mr. BOND. Objected to as immaterial.

A. It did not; it stated that they should not.

Q. 27. Please look at the model now shown you, marked "Cawood Machine," and state if you ever saw a machine like that in operation.

A. That is a model of the Cawood machine originally, very near; a little alteration; his original machine was different from this; the first invention, the one that was in use when I invented mine, different from this, but the principle was very near or quite the same; I have seen the same thing in operation with his improvements on it.

Q. 28. Can you state what the improvements were?

(Same objection.)

A. The difference there is between this and the original—the jaw here was stationary instead of being movable, and the slide of the jaw slipped over on the back side here with that eccentric, and cheek pieces tapped here and here, and bolted on both sides to sustain and support the eccentric shaft, and that crank was on the other side of the machine from where it is now, and where the crank is now fixed there was a lever came up something similar to the arm of this lever, so as to take hold of the handle of that, and when the blacksmith brought out his heat and laid it in the jaws the men could catch hold of the crank and throw up that lever and come up just right here with the helpers, and come on there with the sledges—onto that lever with a couple of blows, sometimes three, to squeeze the rail in its place by tightening the lever at the point where this patch comes on with the sledges.

Q. 29. Please state what effect, if any, you noticed in the operation of the Cawood machine?

(Objected to as immaterial.)

65 Well, we had three of them in use in the Michigan Central shops

at that time, at Michigan City, Indiana, and when they came on with the sledges onto that, enough to tighten the jaws up upon the rail, the bolt would fly in pieces in the block, and then the machine would be down until we took a ratchet and drilled; and drilled all the bolts out, or tapped them over new in the block and make new screws, and new bolts and bolt them up and get it repaired. That generally laid one fire idle for a day, and sometimes two days to repair the block, in consequence of the breaks. In the fall and winter, when frost was in the iron, it was liable to break off—very liable to most every day. Every day there would be some one of the fires broke down in that way, and that is what drove me to study for some improvement—for something that would not be breaking down so often.

Q. 30. Which machine works the best—yours or the Cawood?

(Same objection.)

A. My machine works the best, of course.

Q. 31. After the introduction of your machine on the Michigan Central which did they use the most?

(Same objection.)

A. They used mine altogether. They took the Cawoods out and ordered them melted up to make others. There was one machine came up from Detroit—either Detroit or Marshall—that never had been in use, which was melted up.

Q. 32. Which did they use most on the Michigan Southern and Northern Indiana Railroad?

(Same objection.)

A. They used my machines the most. I want to remark right here, the Cawood machines became a handy machine for working the bars around switches; to bend the bars; we could put a bar in and bend it where we was a mind to, to make the curves. It was handier for that than mine was, and they reserved some of the Cawood machines that they had for that purpose.

Q. 33. Please look at the model now shown you marked "Exhibit Bayonet Machine Pattern, L. S. & M. S. R'y," and state as near as you can when you first saw such a machine in operation?

A. Well, the first one I ever saw of that pattern was at La Porte. I think it was in the year 1861 or 1862; I cannot tell which.

Q. 74. When did you leave the employ of the M. S. & N. I. Railroad?

A. I should think it was in the fall of 1861.

Q. 35. Where did you go after that?

66 A. I remained there in Elkhart. I left there in 1864, I think.

Q. 36. How were you employed during that time after you left the road?

A. At Elkhart?

Q. 37. Yes, sir.

A. Well, I was keeping boarding-house and was elected justice of the peace. I officiated as magistrate there in Elkhart what time I remained there.

Q. 38. Please state whether it was before or after you left the road that you saw such a machine at work?

A. It must have been before I left the road, for I was not around among the shops much afterward.

By Judge NILES:

Q. 39. When you say you do not recollect the contents of the written instrument will you state more definitely what you mean; whether you did or did not remember the substance of it?

By Mr. BOND: Objected to as incompetent, immaterial, and irrelevant.

A. The substance of it was to convey to them the right of manufacturing and using.

Q. 40. Can you not state the substance of it somewhat more fully than in your last answer. I do not refer to the words—the exact words?

(Objected to.)

A. I don't know as I can state any more fully than that any way.

Q. 41. Did the writing specify the extent of the right of manufacture and use of the machine which you granted to them?

(Objected to.)

A. Why, for their Michigan Southern and Northern Indiana Railroad Company, with their branches.

Q. 42. Do you remember whether the writing named the consideration which you received?

(Objected to.)

A. The consideration was made to show a great deal more than we would get. I think it was made to represent a sale for a thousand dollars, which is more than we got—a great deal, I know.

Cross-examination by Mr. BOND:

Q. 43. At what place did you reside after you left Elkhart up to the time you located at Penfield, where you now are?

A. I resided a short time at Jackson. I went from Elkhart to Jackson, Michigan. I went from Jackson to Kansas City, Missouri. I remained there about a year and a half, I think; I don't know as it was quite so long as that. I can't say. I went on the Kansas City bridge that was built across the Missouri River at Kansas City. Had charge of the iron work. Got through with that and went back to Elkhart and remained two or three months. From there I went to Penfield, Monroe
67 county, New York, and have lived there ever since. It was in the year 1865 that I went to Missouri from Jackson.

Q. 44. Were you a witness at the trial of Turrill & Wormley against the Michigan Southern and Northern Indiana Railway Co. at Detroit. If so, state when that was.

A. I was a witness there before the court; it was, I think, in the summer of 1864—the season of 1864. Mr. Turrill probably could correct me if I am mistaken in the date.

Q. 45. How do you fix the date at which you first saw this bayonet machine at La Porte?

A. The way I fix the date is this: it is about the time I quit the railroad. I never had seen nor heard of it previous to about the time I left the railroad. I was at La Porte and I saw one of these, the first one I ever saw. I had heard of it.

Q. 46. Was there not one of those machines at the trial in Detroit?

A. I think not; I never saw one there; have no recollection of it.

Q. 47. Did you not see a machine standing on the sidewalk near the court-room door?

A. I saw a Cawood machine standing there.

Q. 48. But don't remember seeing the bayonet machine?

A. No, sir.

Q. 49. What business were you engaged in for the company at Elkhart?

A. The Michigan Southern and Northern Indiana Road?

Q. 50. Yes, sir.

A. I had charge of the shop—the blacksmith shop.

Q. 51. Were you mending rails in that shop?

A. Yes, sir.

Q. 52. How many machines did you then have for mending rails?

A. We had three.

Q. 53. If they had any names by which they were known, please state what those names were.

A. When I first went there?

Q. 54. Yes, sir.

I think one was a Cawood machine. One was a Beebe & Smith machine, and the other was merely a cast-iron block with these swedges in it like this, to swedge the sets, a plain surface and jaws to it to hold the rail, when I first went there.

Q. 55. Did they have any other or different machines when you left?

A. They had all Beebe & Smith machines when I left.

Q. 56. That was when?

A. When I left the shop was in 1861, I think.

Q. 57. Didn't they have some Whitcomb, or rack and pinion machines there, sometimes known as the Cleveland blocks?

A. No, sir; they had none while I was there.

Q. 58. How was the movable jaw operated in the machine which you saw; that was the Cawood machine?

68 A. Moved by an eccentric, like his first style, if I recollect right.

Q. 59. Do you know what kind of machines, and how many they had at La Porte at that time?

A. No; I cannot tell how many they had.

Q. 60. Had they other machines when you delivered the one you have mentioned at La Porte?

A. Yes; I think they had a rack and pinion machine there when I delivered the first one I sold to the company; I think they had the rack and pinion machine there.

Q. 61. Do you know whether the machine that you delivered at La Porte was put in operation there, or whether it was sent by the company to Elkhart?

A. It was put in operation at La Porte, the first one I sold them.

Q. 62. How many machines had you sold them up to the time you met Mr. Campbell at Toledo?

A. I had not sold them but two, that includes the one that I let Mr. Campbell have at the time I sold them the right; I recollect a circumstance I would like to speak of; I don't know but it would disconnect your work, if I can be allowed the privilege; the first machine I sold them at Michigan City; I worked at Michigan City; that first machine that I sold them I took over to La Porte and put in use there, and they broke off one of these jaws, broke out a piece and could not use it any more until I went to work there for the company; I went to La Porte and got the

machine and put on a piece of wrought iron on the jaw, and put it to work at the Elkhart shop; after that I sold to Mr. Campbell the right of manufacture and use, and sold them another machine with it to put there to work at the Elkhart shop; they manufactured and used them at Adrian; a good many of them in the repair shops at Adrian, which is on the Jackson branch; it has been so long since that it is difficult for me under the circumstances, with the condition of my head, to recollect day and date, etc., that is, perfectly.

Q. 63. How do you fix the date of the meeting at Toledo between yourself and Mr. Smith, your partner, and Mr. Campbell, to be in 1859?

A. I have to be guided by other things in order to fix the date; it was before I left the shop, and it was after I went to work for them, and it had to be in some one of those years; I knew that it had to be in the latter part of 1859; that is, 1858 or 1859; no, 1859 or 1860; it must be the latter part of 1859 or the fore part of 1860, I think.

69 Q. 64. Had you at that time sold or parted with any portion of your patent?

A. No territory; had not sold them any rights; that was the first, with the exception of one sold to Cobb & Roberts; they owned two-quarters shares in it.

Q. 65. This paper, you think, conveyed all the right which you and Smith had in the patent so far as that road was concerned, do you?

A. To the railroad company you are speaking of?

Q. 66. Yes, sir.

A. Yes; as far as their manufacture and use of it was concerned, giving them all the privileges I had myself, but not to manufacture and sell to other parties.

Q. 67. Are you as positive that you saw the bayonet machine at La Porte as you are that you did not see it at Detroit?

A. I am; yes, sir.

Q. 68. Do you know where John D. Campbell now is?

A. I know from report. He is dead and in his grave. He died at Toledo while I was living at Elkhart.

Q. 69. Do you know what machines were in use at the different shops at which the company mended rails along its line?

A. I cannot say that I did know all the different machines that were used. I certainly do not know that now.

Q. 70. Nor how many at all of the shops?

A. There was some shops I never was in; knew nothing about what they were using.

Q. 71. You think your machine was a better machine than the Cawood machine for that purpose?

A. I do; I know it was.

Q. 72. Was it better than the rack and pinion machine?

A. Yes; for just repairing rails it was better.

Q. 73. Was it better than the bayonet machine?

A. I think it was; I should prefer it. There was nothing about it to get out of order.

Q. 74. What did it cost to make one of your machines?

A. There is two sizes; I think $36 and $40; I don't recollect; at that time, just making them in the rough, ready to put them into work. I sold them for more than that, of course.

Q. 75. At how many times and with whom have you had conversations in reference to this transaction at Toledo with Mr. Campbell?

A. Well, I cannot tell when was the first time, exactly; I guess day before yesterday, with two gentlemen in this man's office here, Mr. Payson; they asked me some questions about it, and I answered them.

Q. 76. At whose request did you come to Chicago this trip?

A. Mr. Paine's, the superintendent of the Lake Shore and Mich-
70 igan Southern Road.

Q. 77. When did you leave Penfield to come here?

A. Last Monday morning.

Q. 78. Did you know before you left home what points you were to testify to?

A. No; I did not. I did not know what points I was to testify to. I knew it was this old suit—this Turrill and Michigan Southern Railroad Company's suit. I knew it was a suit between them, but whether the Beebe and Smith machine or the Cawood block, I did not know; or any block.

Q. 79. There was nothing said to you until day before yesterday about this transaction with Mr. Campbell, by any one?

A. No, sir.

Q. 80. Have you had any conversation with any one in reference to it since the time you and Mr. Campbell and Smith were together at Toledo?

A. I have no recollection of it; I think not. The whole matter is old and so far gone and lost; a thing I never expected would be waked up again. It confuses my head for to call up these matters.

Redirect examination by Judge NILES:

Q. 81. When you made the sale to Mr. Campbell, did you and Smith still own the entire right?

A. Yes, sir; we had not sold any territory; we owned the whole.

Q. 82. Had you sold any interest in any territory, or any part interest in the patent then, or did you own the entire interest?

A. We owned the entire interest, Beebe & Smith, at that time.

Q. 83. When you speak of a sale to Roberts and Cobb, did you mean to indicate anything as to the time when you made that sale?

A. No; I did not indicate any time.

Q. 84. Was the sale to Cobb and Roberts before or after the time when you made the sale to Mr. Campbell?

A. It was before. All there was about the sale to Cobb was, we gave him a quarter interest for his influence, and sent him out as an agent. He went East on the Vermont and Massachusetts road, made some pretty heavy sales, came home drunk, and had not made anything, and gave up all his right. Whether he ever had a deed of it I do not know; it appears to me he had. Mr. Roberts in the same year, that is, 1857, about July, I think, we sold him a quarter interest and gave him a deed of it. He deeded to us, Beebe and Smith, seven city lots in Grand Rapids, Mich-
71 igan, and a forty-acre farm three miles out of Grand Rapids, for another quarter interest. I went down to pay the taxes and found that the seven lots was eaten up by back taxes, and the forty acres was already sold under an old mortgage before he let me have the deed of it, and I came home and compelled him to give up his deed of the

quarter interest, and I returned him his papers back—deeded the property back to him again.

Q. 85. And up to the time of the sale to Campbell you had made no other deed?

A. No, sir.

Q. 86. Mr. Beebe, you speak of the sales to Cobb and to Roberts being cancelled; will you now state whether that cancellation was before or after the time of your sale to Mr. Campbell?

A. It was after; no, the sales to Cobb and Roberts was cancelled before we sold to the Michigan Southern Railroad Company, if I ain't mistaken. I can't get it through my head exactly why the sale to Cobb and Roberts was cancelled; all traded back again before we sold to the Michigan Southern Railroad Company. Yes; that is correct. That is all I have to say about it.

LYMAN BEEBE.

Subscribed and sworn to Jan'y 7, 1878.

H. W. BISHOP, *Master, &c.*

Filed , 1878.

Deposition of Charles Paine.

Testimony taken before Henry W. Bishop, master in chancery of said court, Wednesday, the 6th day of March, A. D. 1878. Present, L. L. Bond, esq., of counsel for complainant, S. H. Turrill, and the complainant in person, and George Payson, esq., of counsel for said defendants, and the witness below named.

CHARLES PAINE, a witness on behalf of the said defendants, being duly sworn, was examined in chief by Mr. Payson, and deposes and says as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. My name is Charles Paine; residence, Cleveland, Ohio; occupation, general superintendent of the Michigan Southern and Northern Indiana Railroad. Have been in that office for the last six or seven years.

Q. 2. Did you ever know anything about a license made by
72 Beebe & Smith to the M. S. & N. I. Railroad Company; if so, what?

A. I agreed with Mr. Beebe on the part of the railroad company for such a license, I being then superintendent of the western division. I should think it was in the year 1859. This was by direction of John D. Campbell, who was then general superintendent of the M. S. & N. I. Railroad Company; Beebe was at that time foreman of our rail shop at Elkhart. Beebe and Campbell both told me afterward that such a license was executed. I cannot remember that I ever saw the license.

Q. 3. Please state whether you have made any search for said license; if so, when and where?

A. The license would be expected to be at Cleveland in our general offices, where all other licenses are, so far as I know. I have made thorough search there without finding it, and I have had search made among the old papers of the Michigan Southern and Northern Indiana Railroad in the vaults at Chicago without success.

Q. 75. At how many times and with whom have you had conversations in reference to this transaction at Toledo with Mr. Campbell?

A. Well, I cannot tell when was the first time, exactly; I guess day before yesterday, with two gentlemen in this man's office here, Mr. Payson; they asked me some questions about it, and I answered them.

Q. 76. At whose request did you come to Chicago this trip?

A. Mr. Paine's, the superintendent of the Lake Shore and Mich-
70 igan Southern Road.

Q. 77. When did you leave Penfield to come here?

A. Last Monday morning.

Q. 78. Did you know before you left home what points you were to testify to?

A. No; I did not. I did not know what points I was to testify to. I knew it was this old suit—this Turrill and Michigan Southern Railroad Company's suit. I knew it was a suit between them, but whether the Beebe and Smith machine or the Cawood block, I did not know; or any block.

Q. 79. There was nothing said to you until day before yesterday about this transaction with Mr. Campbell, by any one?

A. No, sir.

Q. 80. Have you had any conversation with any one in reference to it since the time you and Mr. Campbell and Smith were together at Toledo?

A. I have no recollection of it; I think not. The whole matter is old and so far gone and lost; a thing I never expected would be waked up again. It confuses my head for to call up these matters.

Redirect examination by Judge NILES:

Q. 81. When you made the sale to Mr. Campbell, did you and Smith still own the entire right?

A. Yes, sir; we had not sold any territory; we owned the whole.

Q. 82. Had you sold any interest in any territory, or any part interest in the patent then, or did you own the entire interest?

A. We owned the entire interest, Beebe & Smith, at that time.

Q. 83. When you speak of a sale to Roberts and Cobb, did you mean to indicate anything as to the time when you made that sale?

A. No; I did not indicate any time.

Q. 84. Was the sale to Cobb and Roberts before or after the time when you made the sale to Mr. Campbell?

A. It was before. All there was about the sale to Cobb was, we gave him a quarter interest for his influence, and sent him out as an agent. He went East on the Vermont and Massachusetts road, made some pretty heavy sales, came home drunk, and had not made anything, and gave up all his right. Whether he ever had a deed of it I do not know; it appears to me he had. Mr. Roberts in the same year, that is, 1857, about July, I think, we sold him a quarter interest and gave him a deed of it. He deeded to us, Beebe and Smith, seven city lots in Grand Rapids, Mich-
igan, and a forty-acre farm three miles out of Grand Rapids, for
71 another quarter interest. I went down to pay the taxes and found that the seven lots was eaten up by back taxes, and the forty acres was already sold under an old mortgage before he let me have the deed of it, and I came home and compelled him to give up his deed of the

quarter interest, and I returned him his papers back—deeded the property back to him again.

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A. No, sir.

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A. It was after; no, the sales to Cobb and Roberts was cancelled before we sold to the Michigan Southern Railroad Company, if I ain't mistaken. I can't get it through my head exactly why the sale to Cobb and Roberts was cancelled; all traded back again before we sold to the Michigan Southern Railroad Company. Yes; that is correct. That is all I have to say about it.

LYMAN BEEBE.

Subscribed and sworn to Jan'y 7, 1878.

H. W. BISHOP, *Master, &c.*

Filed , 1878.

Deposition of Charles Paine.

Testimony taken before Henry W. Bishop, master in chancery of said court, Wednesday, the 6th day of March, A. D. 1878. Present, L. L. Bond, esq., of counsel for complainant, S. H. Turrill, and the complainant in person, and George Payson, esq., of counsel for said defendants, and the witness below named.

CHARLES PAINE, a witness on behalf of the said defendants, being duly sworn, was examined in chief by Mr. Payson, and deposes and says as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. My name is Charles Paine; residence, Cleveland, Ohio; occupation, general superintendent of the Michigan Southern and Northern Indiana Railroad. Have been in that office for the last six or seven years.

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72 Beebe & Smith to the M. S. & N. I. Railroad Company; if so, what?

A. I agreed with Mr. Beebe on the part of the railroad company for such a license, I being then superintendent of the western division. I should think it was in the year 1859. This was by direction of John D. Campbell, who was then general superintendent of the M. S. & N. I. Railroad Company; Beebe was at that time foreman of our rail shop at Elkhart. Beebe and Campbell both told me afterward that such a license was executed. I cannot remember that I ever saw the license.

Q. 3. Please state whether you have made any search for said license; if so, when and where?

A. The license would be expected to be at Cleveland in our general offices, where all other licenses are, so far as I know. I have made thorough search there without finding it, and I have had search made among the old papers of the Michigan Southern and Northern Indiana Railroad in the vaults at Chicago without success.

Q. 4. State whether there is any other place than those you have mentioned at Cleveland and Chicago where said license would be likely to be?

A. I know of no other place.

Q. 5. Can you state what was done with the papers belonging to the M. S. & N. I. Railroad at the time that road consolidated with the Lake Shore?

A. Current contracts, licenses, and similar papers not expired were taken to Cleveland, except some few which were left for reference at Chicago, as one of the vice-presidents then had his office here. Other papers were stored in the vaults at Chicago, and a few in a safe in vice-president's office in Chicago, and that safe was destroyed with all of its contents.

Q. 6. Do you mean that all the papers of the M. S. & N. I. road went to one or other of these two places?

A. All papers of any value.

Q. 7. Which of the rail-mending shops of the M. S. & N. I. Railroad made the most satisfactory returns?

A. In the comparisons I made for several years, year by year, Beebe's shop at Elkhart.

Q. 8. What kind of machine did they use then?

A. Beebe and Smith machine, exclusively. I think there was no other machine about the shop—my impression; none regularly worked upon.

Q. 9. How did the cost of rail-mending there compare with the cost at the other shops? I mean the cost per foot?

73 A. It was a shade less at that shop than at any other shop on the road.

Q. 10. Was the Cawood machine ever used on the M. S. & N. I. Railroad? I mean the original machine worked by a cam?

A. There was one or two such machines at the La Porte shops in the earliest working there.

Q. 11. How long were they used and what became of them?

A. They were superseded in 1858 by the machine with the rack and pinion.

Q. 12. Why was this change made?

A. Because the rack and pinion machine was much the most satisfactory.

Q. 13. In what respects?

A. For the convenience of the workmen and the firmness with which it held one jaw to the other.

Q. 14. State what defects there were, if any, in the Cawood or cam machine?

A. It was regarded as an awkward machine for the men to operate—not liked as well as the other machine.

Q. 15. State whether or not you know of the Cawood machine ever being used on said road except at La Porte?

A. I don't know of any instance of its use anywhere else on the Michigan Southern & Northern Indiana Railroad.

Q. 16. Would you have been likely to know of such use or not?

A. I don't think I could have failed to know.

By Mr. BOND. Counsel for the complainant objects to so much of the foregoing deposition as relates to any license, as immaterial and incompetent.

Cross-examination by Mr. BOND:

Cross-q. 17. What were the limits of your division when you acted as division superintendent?

A. From Chicago to White Pigeon and Goshen.

Cross-q. 18. Did you know at the time you were division superintendent what was being done in mending rails east of those points?

A. In a general way, only. I presume I visited all the shops. I would not know anything about their accounts.

Cross-q. 19. During what years were you division superintendent?

A. From 1858 to January, 1864.

Cross-q. 20. What position did you occupy from 1864 to 1872?

A. I was chief engineer of the M. S. & N. I Railroad.

Cross-q. 21. Were these rail-mending averages between the different rail shops made when you were division superintendent, or when you was chief engineer?

A. Both, so far as my division was concerned. When division superintendent I kept an account with each shop on my division, and when chief engineer with each shop on the road.

74 Cross-q. 22. Between what points did you have charge of the road as chief engineer?

A. From Chicago to Detroit by one line, Elkhart to Toledo by the other, and all lines of the M. S. & N. I. Railroad.

Cross-q. 23. How did the rail-mending shop at Elkhart, in its returns of rails mended, compare with that at Adrian?

A. During my acquaintance with them the Elkhart shop was a little the best.

Cross-q. 24. You have stated that you made the comparison for several years between the shops in reference to rail mending; during what years did you make such comparison, and how many and what shops were included in the comparisons?

A. From 1858 to 1864 the comparison was of La Porte shop with Elkhart shop, afterwards the shops at Coldwater, Adrian, Kendallville, Wauseon, and Monroe, were compared.

Cross-q. 25. What or about what was the date of the last comparison?

A. I should say for the year 1868.

Cross-q. 26. Have you made or had made any such comparison since you became general superintendent?

A. No, such matters are out of my department.

Cross-q. 27. Have you seen or examined any of these old statements for the purpose of refreshing your recollection, or for any other purpose?

A. Not since I became general superintendent.

Cross-q. 28. Your testimony then on this matter of comparison is from your recollection of the results at the time the comparisons were made, is it?

A. Yes, but by a comparison also of the yearly comparisons, one with another.

Cross-q. 29. Can you tell what number of rails were mended at each shop, or for the road during the time such matters were under your charge?

A. I cannot tell except from the annual reports of the company, and I suppose no shop records have been preserved.

Cross-q. 30. So far as you know, then, there are no books of the company by which the number of rails mended or number of feet of mending at each shop can be ascertained definitely, is there?

A. There may or may not be some such books, but I know of none.

Cross-q. 31. Is the company in possession of any books by which the number of rails or of feet mended on the different kinds of machines or machines of the same kind can be definitely ascertained?

A. They are not. I presume all or most of the shop books are destroyed. Old books considered of no value are sold to the paper
75 mill. It is so long since the shops were closed that the accounts referring to them would be thought useless.

Cross-q. 32. Did the company at any time so keep their books or have books that would show the number of rails or of feet mended on the Beebe & Smith machine, on the rack and pinion or Whitcomb machine, the bayonet vise or Michigan Southern machine, or from which the number of rails or feet mended could be definitely or approximately ascertained as between the several kinds of machines?

A. Only by the fact that some shops were equipped exclusively with one kind of machine and some with another, and their out-put could be compared. A special account was once kept for several months in order to compare the Michigan Southern machine with the rack and pinion, or Whitcomb. Those are the only records by which such a comparison could be made, and I suppose they are destroyed. With that exception, no books were kept which would afford a comparison between machines. I suppose all books relating to rail repairs in the several shops have been long since destroyed.

Cross-q. 33. When did you institute your search for the lost paper, as stated by you in your examination-in-chief?

A. I think within six months, some time within the year.

Cross-q. 34. You have no personal knowledge of the paper called a license, have you?

A. Only as I have said. I cannot remember to have seen it. I think it more than likely that I took the paper from Beebe because I was engaged in the transaction, but I cannot remember about it.

Cross-q. 35. From the time of that transaction, or of your talk with Mr. Beebe, when did you next hear of the existence of or call for such a paper?

A. Some time within the last twelve months.

Cross-q. 36. When Mr. Campbell was superintendent where did he keep his office?

A. In Toledo, I think, all the time. In Toledo.

Cross-q. 37. In the early days of rail mending on your road, were not the rack and pinion or Whitcomb machine usually or frequently called Cawood machines?

A. I think I never heard the word Cawood until the suit at Detroit against the Michigan Southern was instituted. After that the rack and pinion machine was frequently called the Cawood machine.

CHARLES PAINE.

76 Subscribed and sworn to before me this 7th day of March, A. D. 1878.

H. W. BISHOP,
Master in Chancery of the Circuit Court of the United States for the Northern District of Illinois.

Filed , 1878.

Deposition of C. D. Roys.

Testimony taken before Henry W. Bishop, master in chancery of said court, Friday, the 8th day of March, A. D. 1878. Present, L. L. Bond, esq., of counsel for the complainant, S. H. Turrill, and the complainant in person; and George Payson, esq., of counsel for said defendants, and the witness below named.

C. D. Roys, a witness on behalf of the defendants, being first duly sworn, was examined in chief by Mr. Payson, and deposes and says as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. C. D. Roys; age, 40; business, attorney; residence, Chicago.

Q. 2. What relation do you sustain to the Michigan Southern & Lake Shore Railroad?

A. Attorney at Chicago. Have been so for the last seven or eight years.

Q. 3. Please state whether or not you have made a search among the papers of said company for a license made to the Michigan Southern & Northern Indiana Railroad Company, by Beebe & Smith, under the Beebe & Smith patent of 1857, for improvement in swage-blocks for repairing rails. If so, with what success?

A. Well, I can't say I looked for a release under that patent of that particular date, for I did not know the date. I was requested to look for a release of Beebe & Smith for the Michigan Southern & Northern Indiana Railroad, a release running from Beebe & Smith to the Michigan Southern & Northern Indiana Railroad. After careful search I failed to find any.

Q. 4. When and where was that search made?

A. I can't fix the date. Some time within the last six months, and made through the vaults and packages and boxes of old papers and vouchers pertaining to the business of the Michigan Southern & Northern
77 Indiana Railroad in Chicago.

Q. 5. State whether or not you knew the general character of the paper you were looking for?

A. I did.

Q. 6. You knew it was a paper from Beebe & Smith to the M. S. & N. I. Railroad Company, did you?

A. I did; supposed to have been given when Mr. Beebe was in the employ of that company.

Q. 7. Did you in that search find any paper made by Beebe & Smith, or either of them?

A. No, sir.

Q. 8. Were any papers belonging to the present Lake Shore & Michigan Southern Railway Company destroyed in the Chicago fire of 1871?

A. Yes, sir.

Q. 9. When was the present corporation formed, known as the L. S. & M. S. Railway Company?

A. I think it was in 1868.

Q. 10. Since the consolidation what company has had possession and control of the papers formerly belonging to the M. S. & N. I. Railroad Company?

A. The Lake Shore & Michigan Southern.

Q. 11. And where would all such papers, if in Chicago, have been at the time of your search?

A. They would have been in the vault on the second floor of the passenger depot, or put away with files and boxes in a room on the third floor of the same building; they might have been in one of the safes.

Q. 12. And this was where you made your search, was it?

A. Yes; except one of the safes had been burned in the fire of 1871.

Cross-examination by Mr. BOND:

Q. 13. Was you one of the attorneys of the company at the time of the great fire of 1871?

A. Yes, sir.

Q. 14. When were the principal offices of the company moved to Cleveland, Ohio?

A. I can't fix the date, but it was immediately after Mr. E. B. Phillips ceased to act as president of the consolidated company; that was some time prior to the fire; I cannot fix the date.

Q. 15. Had you any personal knowledge of the paper or papers hunted after?

A. No, sir.

Q. 16. Who requested you to make the search that you did make, and when?

A. Mr. Payson or Mr. Paine; my recollection is, that I received a note from Mr. Payson asking me to make search for that release, and at the same time Mr. Paine was here and talked with me about the release, the time it was executed, the certainty of the fact that it was
78 executed, and wished that I might find it.

Q. 17. You have stated that you knew the character of the paper you were looking after. How did you know it, and what was its character?

A. I knew it from the conversation referred to, which I had with Mr. Paine, in which he described it as a paper executed by Beebe & Smith to the Michigan Southern & Northern Indiana Railroad Company, releasing or granting to that company the right to use the Beebe & Smith machine for an unlimited time. I understood it was a release for all past use and for all future use, and executed at a time when Beebe or Smith, or both of them, were working at Elkhart in the employ of the company.

Q. 18. All of this you learned from either Mr. Paine or Mr. Payson, did you.

A. All concerning the character of the paper, and the time of its execution, I learned from Mr. Paine.

Q. 19. Did you overhaul all of the papers in the vaults examined by you, or those only of the years when Mr. Beebe, or Beebe & Smith were in the employ of the company at Elkhart?

A. I made two searches, the first one taking in a period of three or four years; I cannot name the years. I then notified Mr. Paine that I was unable to find such a paper. He then wrote or telegraphed that there was such a paper, and unless it was destroyed by the fire I should be certain to find it by making a more thorough search. I then commenced among the vouchers of the consolidated company and examined every box of vouchers through all the papers in the office.

Q. 20. Did you examine the books of the company?

A. I did not.

C. D. ROYS.

Sworn to and signed before me.

H. W. BISHOP, *Master, &c.*

Filed July 18, 1878.

WM. H. BRADLEY, *Clk.*

79 *Deposition of George F. Smith.*

Testimony taken before Henry W. Bishop, master in chancery of said court, Tuesday, the fourteenth day of May, A. D. 1878. Present, George Payson, esq., solicitor for the defendants; L. L. Bond, esq., solicitor for the complainant; Samuel H. Turrill, esq., and the witness.

GEORGE F. SMITH, a witness on behalf of the defendants, being first duly sworn, was examined in chief by Mr. PAYSON, and deposes and says as follows:

Q. 1. Please state your name, age, residence, and occupation.

A. George F. Smith; age, 49; occupation, a manufacturer; residence, Michigan City, Indiana.

Q. 2. Are you one of the patentees of the patent granted to Lyman Beebe and George F. Smith, in 1857, for a swage-block for mending rails?

A. I am.

Q. 3. Did you ever make a license under that patent to the Michigan Southern and Northern Indiana Railroad Company?

A. Yes, sir.

Q. 4. Please state when, as near as you can recollect?

A. My impression of it is in the winter of 1860, or in the spring of 1861.

Q. 5. Please state, as near as you can, the substance of that license.

A. Well, that I could not do; it has been so long since the license was given that it would be impossible for me to state, only from the impression I have of it. Of course, it was a license granting them the right to make and manufacture machines for their road and branches, but as for stating the wording of the document, it would be impossible for me to do it.

Q. 6. What was the consideration?

A. I think it was three hundred dollars.

Q. 7. Who represented the railroad in that transaction?

A. Mr. John M. or John H. Campbell, the superintendent at the time. I think it was John Campbell.

Q. 8. What other roads did you sell machines to?

A. Well, it would be pretty difficult for me to tell, as I have no memorandum of it.

Q. 9. I will ask you then, particularly, were any sold to the Illinois Central Railroad; and, if so, how many?

A. I think there was two sold to the Illinois Central, as near as I can remember.

Q. 10. By whom?

A. By Mr. Roberts. I think he sold two to the Illinois Central.

Q. 11. For whom did he make that sale?

80 A. For Beebe & Smith.

Q. 12. About when?

A. Well, I could not say, definitely. I think it was in the fall of 1857, or soon after it was patented.

Q. 13. Were any machines sold to the Detroit and Milwaukee Railroad? If so, how many, and when, as near as you can state?

A. I sold them the right to make three.

Q. 14. Sold to them when?

A. In 1860.

Q. 15. By whom?

A. I sold them; they manufactured them themselves, paying me a royalty of fifty dollars for each machine. They had a license for three machines, no further.

Q. 16. Do you remember anything about the sale of machines to the La Crosse and Milwaukee Railroad?

A. Yes, sir.

Q. 17. How many machines were sold to that road?

A. My impression is there was three machines.

Q. 18. When were they sold, and by whom?

A. They were sold in June or July, after it was patented; that is the first road that got the machines that were built. My impression is it was three. I think they were sold in July, 1857, by H. H. Roberts.

Q. 19. For whom?

A. For the company.

Q. 20. Who composed the firm?

A. Mr. Beebe, myself, Mr. Cobb, and Mr. Roberts, at that time.

Q. 21. How came you and Mr. Beebe to invent the swage-block spoken of?

A. Well, it was on account of the trouble that Mr. Beebe had had with the Cawood patent they were using at that time. The machines they were using at that time had, if I remember rightly, eighteen bolts, tapped in the bed-piece; when one of these bolts broke, of course it threw the machine out of use until the bolt could be drilled out and tapped over, and another bolt fitted in; and Mr. Beebe spoke to me about it one day, as one of these machines was lying idle, and says, "I think we can get up a block that will beat this; what do you say to go in with me?" Says I, "All right." I inquired of him what his ideas were, and he marked on the side of the bed-piece an outline of a diagram of what he proposed would answer the purpose. Well, I went into my shop, and I made a sketch. I improved on his plan; did not accept it, but made it different, and made a model from it, the same as was patented. There never was any alteration made in it since, that I know of.

Q. 22. How was this Cawood machine spoken of, that broke in the way mentioned, operated—on cams, or in some other way?

A. How was it operated?

81 Q. 23. Yes.

A. With a cam. My recollection of it, there was a crank on one side; one jaw was cast stationary on the bed-piece, and the other jaw moved up horizontal, and there was a crank on one side that turned a crank, and that threw the jaw up, and on this side was a very heavy crank they used to drive on with a sledge, and throw this cam or eccentric over the centre, so as to clamp it up there and hold it. That is my impression of the construction of the Cawood block at that time.

Q. 24. How often did these breakages use to occur?

A Well, that I cannot say. I could not speak as to that. I have heard Mr. Beebe say, though, that it was a very frequent occurrence, but not of my personal knowledge. In fact it might break down twenty times a day and I should not know anything of it.

Q. 25. If it did so break down, what was the effect so far as working with it was concerned?

A. Well, it would probably have to be laid aside until the bolt could be drilled out and another one tapped in its place; another bolt made and tapped, or rather the hole tapped out, taking the old bolt out. If you marred a thread in it you would have to tap it over again, and put another bolt in its place.

Q. 26. How long would that take?

A. Well, sometimes it would take half a day before they would get it repaired.

Q. 27. Then, as I understand you, Mr. Beebe suggested the getting up of this machine to obviate the defects found to exist in the operation of the Cawood?

A. That was it.

Q. 28. After making the Beebe and Smith machine, what machine was used on the Michigan Central road?

A. At the time we got our machine up, the Cawood machines were used; a great many of them on the Michigan Central.

Q. 29. What did they use after the Beebe and Smith machine was introduced?

A. Well, they used ours. They sold us the Cawoods, and they were melted over into our machines. They were sold, rather, for old iron at the foundry, and ours were cast.

(Counsel for the complainant objects to all the foregoing testimony in reference to any license to the Michigan Southern and Northern Indiana or Lake Shore roads, as irrelevant, incompetent, and improper under the issues of this case; also to the testimony offered as to the contents of said license, or the contents of any supposed license, as the loss of such

82 document is not sufficiently shown or proven; also, that such testmony is wholly irrelevant and incompetent in all of the other suits named in the caption hereof, except in the suit pending against the Mich-

110-301

FILED
OCT 22 1883
JAMES H. McKENNEY, Clerk.

IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1883

ILLINOIS CENTRAL RAILROAD COMPANY,
Appellant,
vs.
SAMUEL H. TURRILL,
Appellee,
No. 112.

MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD COMPANY,
Appellant,
vs.
SAMUEL H. TURRILL,
Appellee.
No. 113.

Appeals from Northern District of Illinois.

BRIEF FOR APPELLANTS.

By GEORGE PAYSON,
Counsel.

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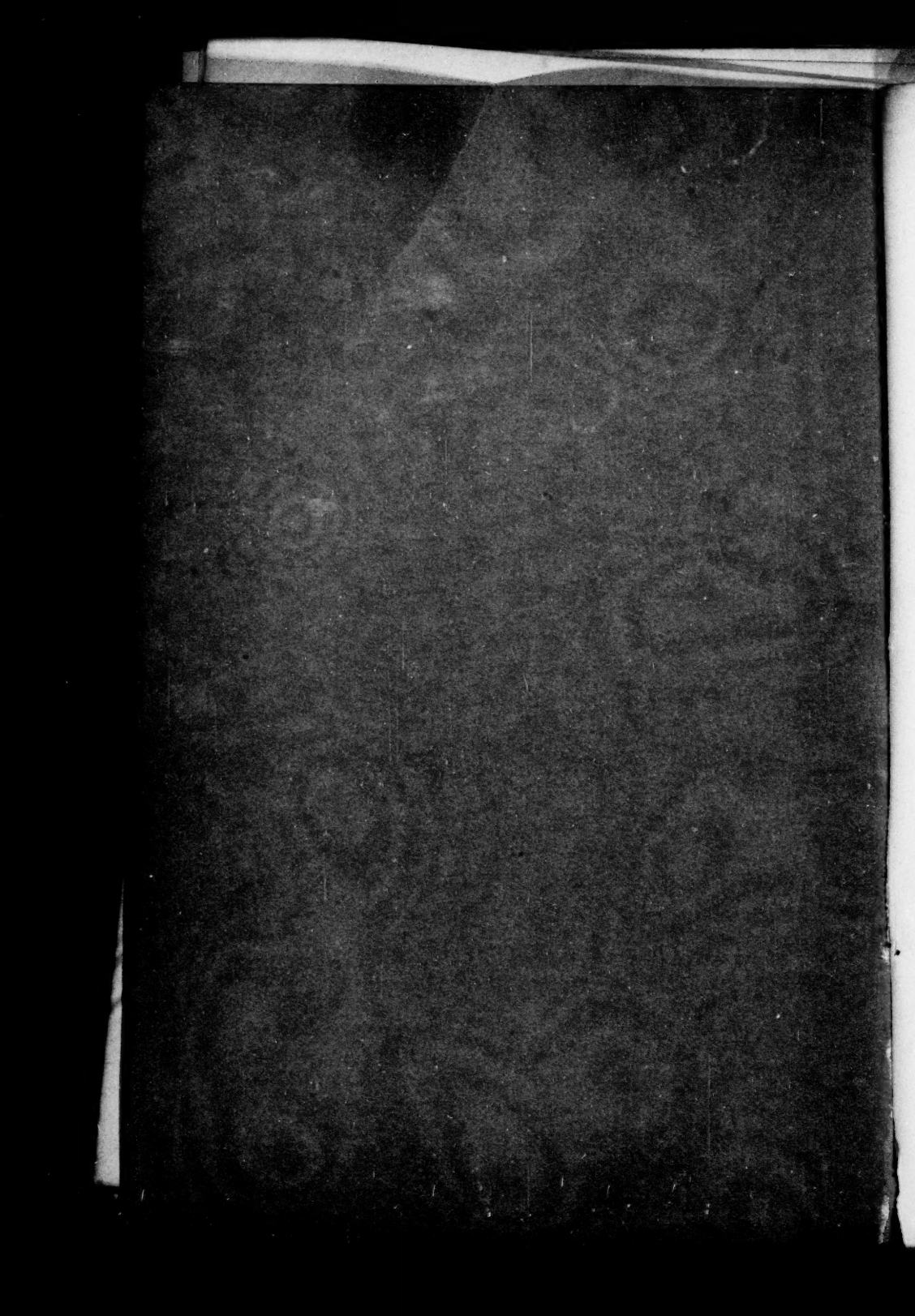

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Appeals from Northern District of Illinois

BRIEF FOR APPELLANTS.

These are two suits in equity for an alleged infringement of the patent of J. D. Cawood, of September 9, 1856, for an improvement in the common anvil for repairing railroad rails. The litigation on this patent began at Detroit, with a suit at law against the Michigan Southern & Northern Indiana Railroad, resulting in a judgment for defendant, which was reversed on the ground that the court below had erred in its instructions to the jury. (1 Wall. 491.) On a second trial the jury failed to agree, and some years after, the case was dismissed. The present suits, with three others, were begun in 1868. The defenses were that the patent was in-

valid for want of novelty, and that some of the machines used by the defendants were not infringements. To establish their first point, defendants offered in evidence: The Springfield Bayonet machines, used in the United States Armory in forging bayonets, and the Angle Iron machine, used at Cincinnati for forging the frames of locomotives.

The Angle Iron machine, as will be seen from the models, differed from the Cawood only in the shape of the jaws; it had an anvil for its base, a fixed jaw cast with the anvil, and a movable jaw sliding on the anvil.

It *happened* to have been used in a particular way, and for holding a particular article, but it was capable of being used in the same way as the Cawood, and of holding the same article. To fit it for holding a Trail nothing was needed but to change the face of the jaws; for a *strap* rail no change whatever would have been required.

The court below, however, sustained the patent; found all but one of the machines used by the defendants to be infringements, and finally entered its decrees in favor of complainant for the aggregate sum of $429,162.81, as the amount saved by the five defendants by using the patented device in comparison with the common swage-block; the decree against the Illinois Central being for $91,980.83, and that against the Michigan Southern $222,661.89.

There was no account accompanying these decrees, nothing to show with any certainty how the amounts were arrived at, or the time covered by the decrees, or the number of rails patched, or the length of patch per rail, or the supposed saving per foot.

The master had rendered an account in which he had included all the rails mended by the defendants from the date of the patent, and had estimated the saving at 48 cents per foot. He had also deducted one-sixth from the total number of rails mended on account of rails that had been repaired simply by cutting off their ends without using the machine. To these several findings the defendants excepted, and the court in part sustained the exceptions; that is, it found that complainant was not entitled to recover profits before he had title to the patent, or any part or interest therein; that a larger deduction should have been made on account of cut rails, and that 48 cents a foot was too high an estimate of the savings. But just what period of time was covered by the decrees, or what deduction was made on account of cut rails, or how much the court allowed as the saving for each foot of rail actually mended on the machine, is nowhere stated in the record; though it has always been assumed that a deduction of one-fourth was allowed the defendant on account of rails that were simply cut, without being mended, and that 36 cents was taken by the court as the saving per foot.

On appeal to this court the validity of the patent was affirmed in a very able, but, as the defendants think, mistaken opinion, delivered by Mr. Justice Strong, and reported in 94 U. S. 695. But three of the machines used by these defendants, viz., the Bayonet Vice, the Michigan Southern and the Beebe & Smith machines, being held no infringement, these two cases were reversed and remanded "for further proceedings to be had therein in conformity with the opinion of this court;" that is, for a new account-

ing based on the finding that neither of the said machines was an infringement of the Cawood patent.

On this accounting additional evidence was offered by both parties, on which, in connection with that already in the case, the master made up his report. Nothing was said in the order as to the time to be included in the accounting, but it purports to have begun Feb. 18, 1862, and ended September 9, 1870, when the original term of the patent expired, though the rail-mending on these hand machines practically ceased a year or two before that date. The master also assumed that in estimating the profits the comparison was still to be made between the Cawood machine and the old Swage block; though this court had found the Beebe & Smith, the Bayonet Vise and the Michigan Southern machines to be independent inventions; and though some or all of these machines were free and open to defendants to use during a large part of the time when the alleged infringements were committed.

He adopted in full the account prepared for him by the plaintiff's counsel, and according to that account found the work done by the Illinois Central on the non-infringing machines to amount to $2,802 78; which, deducted from the former decree, left $89,177.55 still to be paid by the defendant.

In the case of the Michigan Southern Road he pursued a different method, and, instead of estimating the amount of work done on the non-infringing machines, he endeavored to find how many machines of each kind had been used, and how long, and in that way arrived at the conclusion that the non-infringing machines formed $\frac{80}{196}$ of the whole. Deducting then this proportion from $222,666.89, the amount of the former decree, there was left the sum

of $131,782.45, still due from the Michigan Southern.

To this report numerous exceptions were filed by the defendants, all of which in the case of the Illinois Central Road were overruled, and a decree was entered for the full amount found by the master, with interest from the date of filing of his report, amounting to $3,418.46, making the whole decree $92,596.01.

In the Michigan Southern case the exceptions were also formally overruled; but the defendant having contended that, even on the plaintiff's theory, the evidence showed the non-infringing machines to be $\frac{104}{183}$ of the whole number, instead of only $\frac{80}{179}$, the court concluded to allow defendant one half the difference between these two estimates, and accordingly reduced the master's finding to $113,952.17, with interest, as in the former case, from the filing of the report, amounting to $4,368.12, making the whole decree $118,320.29.

From these decrees appeals were duly prayed and allowed, and the cases are now before this court. The evidence is all found in the record in the Michigan Southern case.

As may be seen from the above statement all the questions here arising relate to the computation of damages. More specifically stated they are as follows:

Are not the damages excessive? Is complainant entitled to any more than nominal damages?

In estimating defendant's profits, should not the comparison have been made between the Cawood machine, and the Beebe & Smith, or the Bayonet Vise, or the Michigan Southern machine, some or all

of those machines having been free and open to defendant to use during a portion of the time of the infringement?

Should not the comparison, in like manner, have been made with the Springfield Bayonet machine?

Was complainant entitled to interest prior to the final decree?

In the case of the Michigan Southern and Northern Indiana road the errors assigned are as follows: First. The court erred in overruling each and every of the following exceptions of defendant to the master's report, severally and collectively. (pp. 15, 18.)

2. For that said master has charged said defendant for a large number of rails mended prior to February 18th, 1862, the time when said plaintiff became sole owner of said patent.

3. For that the said master has charged the said defendant with the difference in the cost of mending between the Cawood and the old Swage block, as if that were the only machine then free and open to the defendants to use; whereas during the whole or a considerable portion of the time covered by said report there were several other such machines, to wit; the Springfield Bayonet, the Bayonet Vise, the Beebe and Smith, and the Michigan Southern machines, all as good or better than said Cawood, and all open and free to said defendant to use.

4. For that in making his said comparison of the cost of mending, he has confined himself to the Swage block machine, and has refused to consider the Springfield Bayonet machines, used at Springfield as early as 1845.

8. For that the said master, as is shown in and by his said report, adopted a false and improper standard of comparison by which to test the value to the said defendants of the Cawood machines in this, viz: The said master, notwithstanding the knowledge and public use of machines for holding rails whilst undergoing repairs, which in his said re-

port are admitted to be equally as good as the Cawood machines, and which are admitted and decided to be non-infringing, still, for the purpose of fixing the amount to be paid by the defendant to the complainant, ignored the existence of said non-infringing machines in respect to all rails not mended thereon, and as to all of said rails, fixed the said amount at what he found to be the difference between mending them upon the Cawood machines and upon the common Swage block; whereas, the defendant insists upon its right to have the comparison made between the cost of doing the work upon the Cawood machines and the best non-infringing machines known, and free and open to the public or to the said defendant.

9. For that the *said master has assumed* that the Cawood machine, as described in said Letters-Patent, was the same as the Rack and Pinion machine used by this defendant; whereas, the evidence shows that the said Cawood was a very inferior machine, and not capable of doing as much work in the same time as the said Rack and Pinion.

11. For that the said master has credited all the savings found by him to have been made by defendant solely to the advantages supposed to be possessed by the Cawood machine, as described in said patent; whereas, a large part of said advantage is due to the improved form of the machine used by the defendant, and not to the said Cawood machine.

13. For that the said master has found the sum of $131,782 45–100 to be the amount of defendant's savings, which is vastly in excess of the correct amount, on any theory, according to the evidence in the case.

14. For that he has found said sum to be due; whereas, it is impossible from the evidence in the case to ascertain the amount of said savings, said evidence being partial and incomplete, and largely based on conjectures, estimates and assertions.

15. For that he has found said sum to be due; whereas, for the reason just stated, only nominal damages should have been allowed.

Second. Said defendant having filed the following other exceptions to said report. the court erred in only partially sustaining the same.

12. For that said master has found that said defendant mended only $\frac{80}{100}$ of its rails on the non-infringing machines; whereas the evidence shows that the proportion so mended was much larger than that; as would appear if the said master had properly stated the account.

18. For that said master has found that four Cawood machines were used at Adrian from February 18, 1862, to *November*, 1869, citing the evidence of Redmond, where Redmond says till *summer* of 1869.

19. For that he finds one-half more work was done at Adrian on the Cawood than on the Beebe and Smith, without any evidence to sustain such finding.

20. For that he finds that two Cawood machines were used at Coldwater from February 18, 1862, to February 18, 1866, citing evidence of Dickens; whereas it appears from said evidence that said two machines were only used till the fall of 1864.

21. For that he finds that one half more work was done on two of the Cawood machines at Coldwater than on the Beebe & Smith, without any evidence to sustain said finding.

22. For that he finds that there were six Cawoods in use at La Porte from February 18, 1862, to February 18, 1865; whereas the evidence wholly fails to support such finding.

23. For that he finds there were four Cawoods in use at La Porte, from 1865 to 1869; whereas, the evidence wholly fails to support such finding.

24. For that he finds there was one Cawood in use at Hudson for five years, citing evidence of George Wagner; whereas, Wagner's description of the machine is wholly ambiguous, and Corbus says expressly, that it was a Beebe & Smith machine.

25. For that he finds that one Cawood was used at Kendallsville, from June, 1864 to January, 1868,

citing evidence of Stewart & Ferenbeck; whereas, said evidence wholly fails to support said finding.

26. For that he finds that four Beebe & Smith's machines were in use at Adrian, from August 1, 1862 to August 1, 1866, citing evidence of Redmond; whereas, Redmond says they were in use till summer of 1867.

27. For that he finds that two Beebe & Smiths were used at Wauseon, from January, 1864 to January, 1868, citing evidence of Ferenbeck; whereas, it appears from said evidence that they were used for six years.

28. For that he finds that two Beebe & Smiths were used at Coldwater from February 18, 1866 to November, 1868 ; whereas, it appears from the evidence that one of these machines was put up the first of May, 1865, and the other still earlier.

29. For that he finds that two Beebe & Smiths were used at Elkhart, from February 18, 1862, to November, 1868, and two in use from August 1, 1862, to November, 1868, without citing any evidence in support of said finding; whereas, it appears from defendant's answer that they had four such machines in use at Elkhart eight years.

30. For that he finds that there was one Beebe & Smith in use at Kendallville, from January, 1864, to January, 1868, citing Stewart & Ferenbeck; whereas, it appears from Stewart's testimony that they began in 1861 or 2, and continued to mend on these hand machines till the fall of 1868; and from that of Ferenbeck that they were in use at least six years.

31. For that he finds that one Bayonet Vise machine was in use at La Porte, from August 1, 1865, to November, 1869, citing evidence of Haverly; whereas, Haverly says he thinks it was put there between 1863 and 1865.

32. For that he has found the number of non-infringing machines to have been equal to only one machine for 80 years, 8 mos. and 10 days; whereas, according to the evidence the proportion should have been much larger.

33. For that he has found the number of infringing machines to have been equal to one machine for 116 years and 10 months; whereas, according to the evidence the proportion should have been much less.

34. For that the amount due from said defendant even on the supposition that the above theory and proposition are both correct, is very much less than found by the master, it appearing from defendant's answer, which is the only evidence in the case, on this point, that they mended from February 18, 1862, down to November, 1869, about 450,000 rails, which deducting one-fourth for cut rails, and calling the mend 18 inches a rail, and the cost 36 cents a foot, would amount to about $108,000 instead of $131,782.45, as found by him.

Third. In passing on said exceptions and even admitting the master's theory to be correct, the court erred in not adopting in full the estimate of damages submitted by the defendant.

Fourth. The court erred in not sending the case back again to the master for a further report.

Fifth. The court erred in not presenting any account with its decree.

Sixth. The court erred in allowing the complainant interest prior to the final decree.

The errors assigned in the Illinois Central case are as follows:

First. That the court erred in overruling each and every of the following exceptions of defendant to the master's report, severally and collectively, pp. 14–16.

2. For that said master has charged said defendant with a large number of rails mended prior to February 18th, 1862, the time when said plaintiff became sole owner of said patent.

3. For that the said master has charged the said defendant with the difference in the cost of mend-

ing between the Cawood and the old Swage block, as if that were the only machine then free and open to the defendant to use, whereas, during the whole or a considerable portion of the time covered by his said report, there were several other such machines, to wit; The Springfield Bayonet, the Bayonet Vise and the Michigan Southern machines, all as good or better than the said Cawood, and all open and free to said defendant to use.

4. For that in making his said comparison of the cost of mending he has confined himself to the said Swage block machine, and has refused to consider the Springfield Bayonet machine used at Springfield as early as 1845.

7. For that the said master, as is shown in and by his said report, adopted a false and improper standard of comparison by which to test the value to the said defendant of the Cawood machines in this, viz: The said master, notwithstanding the knowledge and public use of machines for holding rails whilst undergoing repairs, which in his said report are admitted to be equally as good as the Cawood machines, and which are admitted and decided to be non-infringing, still for the purpose of fixing the amount to be paid by the defendant to the complainant, ignored the existence of said non-infringing machines in respect to all rails not mended thereon, and as to all such rails fixed the said amount at what he found to be the difference between mending them upon the Cawood machines and upon the common Swage block, whereas the defendant insists upon its right to have the comparison made between the cost of doing the work upon the Cawood machines and the best non-infringing machines known, and free and open to the public, or to said defendant.

8. For that said master has assumed that the Cawood machine, as described in said letters-patent, was the same as the Illinois Central machine used by the defendant, whereas the evidence shows that the said Cawood was a very inferior machine, and not capable of doing as much work in the same

time as the said Illinois Central machine.

10. For that said master has credited all the savings, found by him to have been made by defendants, solely to the advantages supposed to be possessed by the Cawood machine, as described in said patent, whereas a large part of said advantages is due to the improved form of the machine used by defendant, and not to the said Cawood machine.

12. For that the amount due from said defendant, even upon the supposition that the theory adopted by the master is the true one, is still very much less than the amount found by him. Thus the total number of rails mended by this defendant from 1862 down to 1869, both inclusive, being 136,852, as found by him, if we then deduct from this 7,785 rails mended on the Beebe & Smith's and Bayonet machines, 3,041 rails paid for in the suit at law, and one quarter of the remainder for cut-offs, we shall have 93,684 rails, or 138,265 feet, which at 36 cents a foot would amount to $49,775.40, instead of $89,177.55, reported by him.

Second. The court erred in allowing the complainant interest prior to the final decree.

ARGUMENT.

The references are to the top paging of the Record. The former Record referred to is the Record in the Illinois Central case on the former appeal.

The point to be settled on this accounting is, how much have the defendants saved by the use of the machines held by this court to be infringements of the Cawood patent, from Feb. 18, 1862, when the plaintiff first became sole owner of the patent, to November, 1869. We will begin with

THE MICHIGAN SOUTHERN & NORTHERN INDIANA ROAD.

Three kinds of machines were used by this road for mending rails; first, the Rack & Pinion; second,

the Beebe & Smith; and third, the Michigan Southern. All three of these were held by the Circuit Court to be infringements, but on appeal the Beebe & Smith and Michigan Southern were both held by this court not to infringe; and the case was remanded for a farther accounting, in accordance with this opinion.

The plaintiff thereupon proceeded to take additional testimony for the purpose of showing, if possible, how much mending was done on the Rack & Pinion machines, on the one hand, and how much on the Beebe & Smith, and Michigan Southern, on the other. The witnesses thus produced by him were James Redmond, George H. Dickens, John P. Stewart, James Haverly, Norman Andrews and S. H. Turrill.

The defendants' witnesses are Lyman Beebe, George T. Smith and Charles Paine.

Both parties also referred to the testimony of some of the witnesses who had been examined on the former accounting: D. Ferenbeck, H. J. Corbus, James Park, George Wagner, James Redmond, Dennis Brennan, and perhaps one or two others.

From this evidence a statement was made up by plaintiff's counsel, and presented by him in argument to the master as the basis of his account. This statement the master adopted *verbatim*, without the slightest alteration, and appended it in the form of a schedule to his supplemental report. There was no attempt to ascertain directly the number of rails mended on the several machines; but, instead of this, certain rude calculations were made of the number of the different machines, and the length of time they were in use; and from the proportions thus established the master deduced the amount of profits.

That the rule in Mowry & Whitney ought never to have been applied in these cases we think must be conceded. If a proper rule in any case, it has here nothing to recommend it. It can produce nothing but injustice. No one can believe that the Michigan Southern road, running from Chicago to Toledo, a distance of 300 miles, actually saved $222,000 by the use of these several machines in the eight years covered by this accounting, or that the Lake Shore road, from Toledo to Buffalo, against which a similar suit is now pending, saved an equal amount in the same time. Apply the same rule to the whole road, during the 21 years covered by the patent, and we have a supposed saving of $1,165,500 from the use of this single invention.

Apply it to all the roads in the United States, calling the average mileage during that period 45,000 miles, as stated in Poor's Manual, and we have in round numbers, $87,000,000; in view of which we may well say, in the language of this court, in *Packet Co.* v. *Sickles*, 21 Wall. 618.

"With these corrective powers in the hands of the "chancellor, the rule of assuming profits as the "groundwork for estimating the compensation due "from the infringer to the patentee, has produced "results calculated to suggest distrust of its univer- "sal application, even in courts of equity."

The fundamental error in the rule, when applied to such cases as the present, is easily discoverable. It consists simply in giving the patentee retail profits on a wholesale business. It makes no allowance for the enormous increase of traffic, and the consequent corresponding decrease of charges. A few illustrations will make this plain. It costs fifty cents to print a bible, while it would cost, we will say, a hundred dollars to produce the same in manuscript.

According to the rule, then, in Mowry & Whitney, the infringer of the printing press would have to pay the patentee $99.50 for every copy sold.

Pins were formerly made by hand; now a few machines will supply the whole United States. The saving on every pin is more than the price now charged for a hundred.

Again, a railroad is but a bundle of inventions. Suppose it to have been invented and patented as an entirety, and that an infringer has carried on it 100,000 barrels of flour from Chicago to New York, for which he has received one dollar a barrel. He has saved, in comparison with the common wagon, nineteen dollars a barrel, all of which he would have to pay the patentee; that is, he would have to pay $1,900,000, where he has actually received in gross only $100,000, on which his profits might possibly reach a thousand. But what is true of the whole road is true of all its parts. The error stated in other words, consists in the assumption that the infringer has sold or might have sold the products of the infringing machine for the same price he would have received for the same thing formerly made by hand, or, as in this case, that the railroad is able to charge and collect the same rates for freight or passage as was formerly charged by the wagoner. A greater error, or one more unjust, even to the wanton infringer, it would be hard to conceive.

Thus in the Mowry wheel case, if by the use of that process the infringer saved one dollar a wheel, and sold a hundred thousand wheels *at the old price*, he might justly be charged with a hundred thousand dollars; but if, in order to sell that number, he had to lower his price half a dollar a wheel, it is evident

that his actual profits have been just so much diminished, and that fifty thousand dollars would be all he ought to pay. In that case the patentee gains whatever advantage may be due to the increased number of wheels sold, and of course ought not to claim the profit *on each wheel* that could only have been obtained, if obtained at all, by the sale of a smaller number at the higher price.

This precise objection to the rule in Mowry & Whitney, as applied to such cases, has, we believe, never before been urged, though it is apparent from the case of *Packet Co.* v. *Sickles* above cited, that the rule itself is far from being satisfactory to this court.

It would seem then that the master, though feeling himself constrained to follow the rule in these cases, should have applied it so as to lessen its unavoidable injustice as far as possible. On the contrary, he has, from the beginning, applied it with the utmost rigor in favor of complainant. In his first report he found the profits made by the Michigan Southern Road alone to be $935,000. When that was set aside by the court he made a second for $831,000; and again a third for $412,000.

On this last accounting he has accepted the account furnished him by the plaintiff without a single modification. Where the plaintiff's witnesses say "two or three" machines, instead of *calling* it "two," or "two and a half," he has called it "three." Where there is no evidence for the plaintiff's statement, or where the evidence is just the contrary to that statement, he has still adopted it. The whole calculation, as we contend, is erroneous; the theory and method of it are both at fault, and even in working it out, the plainest rules of evidence, as it seems to the defendant, are continually disregarded.

It is not here thought necessary to refer specifically to the exceptions, but the argument is presented under the following general heads:

First. It is insisted that the evidence is too vague and uncertain to sustain a decree. The witnesses, as a rule, are sure of nothing; and what they are sure of is not the thing to be proved, but is something quite remote from that, and only to be connected with it by assumption or conjecture. But the plaintiff must prove his damages by some better way than conjectures, estimates and assertions, or he can have only nominal damages. Ingersoll vs. Musgrove, 13 Off. Gaz. 966.

Second. The evidence, even admitting it to be sufficient, falls far short of justifying this report.

The rail mending was not done at one place, but at the different shops of the company along the road. The master has taken them one by one, and we will follow his example, giving first that part of his statement *verbatim*, and then our reply.

I. THE INFRINGING MACHINES.

"At ADRIAN, MICHIGAN, 4 machines were used from Feb. 18, 1862, to November, 1869, seven years, eight months and ten days, equal to one machine for 30 years, nine months and ten days. (See evidence of JAMES REDMOND, where he says there were four Cawoods in use from fall of 1856 to summer of 1869.) Ints. 4 and 5, p. 28. And see Former Record, pp. 484, 5 and 62.

But in the use of the Cawood furnace, fires were used altogether at Adrian, and thereby $\frac{1}{3}$ to $\frac{1}{2}$ more each day was mended than at the open fires.

GEO. H. DICKENS, Ans. to Int. 4, p. 21.

JAMES REDMOND, Ans. to Int. 13, p. 29.

The ordinary day's work on the Beebe & Smith or Cawood, as testified to by defendants' witnesses, was at the open fires from 8 to 10 rails.

JOHN B. STUART, Former Record, p. 664, Int. 32.
H. J. CORBUS, Former Record, p. 674 x Int. 46.

Therefore there was done at Adrian on the Cawood machines $\frac{1}{3}$ to $\frac{1}{2}$ more than an ordinary day's work on the Beebe & Smith; say $\frac{1}{3}$, which is equal to 2 machines extra, equal 2x7 years, 8 months and 10 days, equal to 15 years, 4 months and 20 days."

Now as to this we reply, first, as to the length of use, that *Redmond* says they were used till the *summer* of 1869, not *November*, Int. 5, p. 28; which makes 5 months difference in favor of defendant.

Second, as to the claim that one half more work was done on the Rack & Pinion than on the Beebe & Smith.

1st. This litigation has now lasted 20 years, and no such pretense has ever been made before. On the contrary all the witnesses have uniformly sworn that the same amount of work was done on all the different kinds of machines.

2d. STUART, plaintiff's witness, who had also Rack & Pinion machines at the furnace, and Smith & Beebe at the open fires, never saw any difference. Int. 30, p. 26.

3d. HAVERLY says the men were expected to do the same amount of work with all the machines. And this is what we should expect. Even if one set of men had an advantage in the character of their tools they would not do any more work. They were paid by the day.

4th. DICKENS does not say that they did $\frac{1}{3}$ to $\frac{1}{2}$ more at the furnace, but only that they *could* do it. He says that they mended 8 to 10 feet a day at the open fire, and the same on the Rack & Pinion. Ints. 34, 50, 52, pp. 23, 24.

5th. PAINE says that the shop at Elkhart, where they used nothing but the Beebe & Smith, gave the

best results of all. Ints. 7, 9, p. 48. And this was not conjecture, but based on regular stated accounts. Ints. 21–25, p. 49.

6th. But a more glaring error yet remains. On all the former accountings, when the object was to show that the mending on *all* the machines was as *great* as possible, the master adopted the statements of the plaintiff's witnesses; but now when the object is to show that the mending done on the *non-infringing* machines was as *small* as possible, he, for the first time, adopts the statements made by the witnesses for defendants.

It seems to us certain, therefore, that no more mending was done on these Rack & Pinion machines than on the Beebe & Smith; and to assume that any more was done on such testimony as the above is doing violence to all the rules of evidence. But this is not the worst. *Redmond* does not say $\frac{1}{3}$ to $\frac{1}{2}$ more, but $1\frac{1}{2}$ to 2 rails more, which would be $\frac{1}{6}$ more, not $\frac{1}{2}$. And when the plaintiff's best witness, *Dickens*, says $\frac{1}{3}$ to $\frac{1}{2}$ more, by what right does the plaintiff claim $\frac{1}{2}$? If a witness should swear that A owed B from thirty to fifty thousand dollars, what would be thought of a jury, a master, or a court, that should award him the fifty thousand?

Correcting the above errors, the utmost that can be claimed as done on the Rack & Pinion at Adrian, would be four machines from Feb. 18, 1862 to summer of 1869, 7 years, 3 months and 10 days, equal to one machine for 299 years, 1 month and 10 days.

2. "At Coldwater two Cawood machines were used from Feb. 18, 1862 to Feb. 18, 1866, equal to 4 years, equal to one machine for 8 years. Two Cawoods used from Feb. 18, 1862 to November,'1868, 6 years, 8 months and 10 days, equal to one machine for 13 years, 4 months and 20 days. Two Cawoods

used at furnace fires for 4 years, equal 1 extra machine for 4 years.

GEO. H. DICKENS, Ints. 19, 20, p. 22."

In reply to this we say that Dickens says he went to Coldwater in the fall of 1857; Int. 2, p. 21; soon after they put in 2 Rack & pinion, Int. 5, and soon after 2 more, and they were used 7 or 8 years; Int. 7. Two of them were used till fall of 1868, when they stopped work: Int.11.

The other two, then, could not have been used after the fall of 1864, taking this evidence, as we have a right to do, most strongly against the party producing it, and calling "seven or eight," "seven."

The claim as to the extra machine we have already answered under the head of Adrian. The account at Coldwater therefore thus corrected will stand.

2 machines from Feb. 18, 1862, to November 1864, 2 years, 8 months, 10 days, equal 1 machine for 5 years, 4 months, 20 days.

2 machines from Feb. 18, 1862, to Sept. 1868, 6 years, 6 months, 10 days, equal to 1 machine for 13 years, 20 days.

4. " AT LAPORTE, 6 Cawoods used from Feb. 18, 1862 to Feb. 18, 1865, 3 years, equal 1 machine for 18 years.

(1.) As to No. of machines see evidence of James Park, Former Record, p. 660, Ints. 6 and 7.

(2.) Beebe & Smith machine, put in in 1865—Bayonet Vice.

a. *Jas. Haverly*, Ints. 10-13.

b. Norman Andrews.

c. *Turrill*, as to machines at Detroit.

The assumption is that 6 or 7 machines were used all the time from 1862 to 1869, and that in 1865, 2 Cawoods were displaced by 1 B. & S. and 1 B. V.

4 machines from 1865 to 1868 as above, 4 years, 8 months and 10 days, equal to one machine for 18 years, 9 months and 19 days."

Now as to this *Park* says, they *sometimes* had 5 fires going at La Porte, sometimes 6, sometimes 7; former record p. 660, int. 7. He was there from 1862 to 1868, p. 659, int. 3.

Haverly says the Rack & Pinion was in use in 1857 when he was there and continued till 1867. There were 2 of them; 2 or 3 more were added at different times, he can't tell when. Ints. 5–7, p. 32; and 15, p. 33.

Andrews was at La Porte from '57 to '71. Used the Cawood, Beebe & Smith and Bayonet Vice, from '57 to '69. Near as he can recollect there were 4 or 5 Cawoods; 1 or 2 Beebe & Smith, and one Bayonet Vice. Had charge of the shop about a year in 1869. Before that he knew nothing directly about it. That is he knew nothing of it during the time covered by this accounting. p. 34–36.

This is all the evidence on this point and it fails wholly to sustain the plaintiff's figures. The most that can be claimed is that there were four Rack & Pinion. *Haverly* and *Andrews* are the only witnesses as to the number between 1862 and 1869, and they both say four or five. But this evidence must be taken most strongly against the plaintiff, and four or five therefore would mean four. But four machines from Feb. 18, 1862 to Nov. 1869, 7 yrs. 8 mo. 10 d. equals one machine for 30 yrs. 9 mos. and 10 d.

4. "HUDSON, 1 Cawood 5 years. *Geo. Wagner*, former record, p. 655., Ints 6–11. This witness worked on and describes the machine."

To this we reply that he attempts to describe it; but wholly fails. He says the machine had one fixed and one movable jaw, which would seem to indicate the Rack and Pinion. But he also says that the

jaws moved up and down, which applies only to the Beebe & Smith.

And *Corbus* says expressly that it was the Beebe & Smith; (Former Record, p. 676, Ints. 26-29.) This machine then must be taken from the infringing, and added to the non-infringing machines.

Stuart, plaintiff's witness also says it was a Beebe & Smith. (Int. 4, p. 25).

'5. KENDALLSVILLE. 1 Cawood from June, 1864, to January, 1868, equals 3 yrs. and 6 mos. *Stuart* Int. 65–7. *Ferenbeck*, p. 279, (Former Record).

1. *Ferenbeck* says he went to Wauseon about 6 years before his evidence was taken January 12,'70, p. 279.

2. *Stuart* says he commenced at Kendallsville in the same year and month they did at Wauseon. (Ints. 65–7, p. 25.)"

This will answer for the time when they began, though not strictly accurate; but furnishes no support for the time of ending, January, 1868. *Stuart* only says it was continued in use up to March 15, 1865.

We have then one machine in use from June, 1864, to March 15, 1865, equals ten months and 15 days.

II. THE NON-INFRINGING MACHINES.

"1. ADRIAN. Four Beebe & Smith machines were used from August 1, 1862, to August 1, 1866, equals four years, equals one machine for 16 years. *J. Redmond*, Former Record, p. 484, Ints. 11. And see Dep. Ints. 5, 10 and 11 (referring, as we suppose, to the present record, p. 28.) See *Turrill's* Dep., p. 36."

But *Redmond* says the Beebe & Smith continued

in use until sometime in the summer of 1867. Int. 5. p. 28. Instead of four machines, therefore for four years, we have four for five years, equals one machine for 20 years.

2. MONROE.

The master here estimates the machines at one Beebe & Smith for 12 years, six months, which is probably about correct.

"3. WAUSEON. Two Beebe & Smith from Janutry, 1864, to January 1868, 4 years, or one machine for 8 years. *Ferenbeck*, Former Record, p. 279; Int. 5."

But *Ferenbeck* says he had used the Beebe & Smith at Wauseon for nearly 6 years. Former Record, p. 279, Int. 3. This would give us 2 machines from January, 1864, to November, 1869—equals 1 machine for eleven years, 8 months.

" 4. COLDWATER. Two Beebe & Smith machines were used from Feb. 18, 1866, to Nov., 1868, or 2 yrs., 8 mos., and 10 ds.—equal 1 machine for 5 years, 4 mos. and 20 ds. *Dickens'* Int. 8., p. 21."

But all that Dickens says is, that it must have *been after 1865; while Stuart*, also plaintiff's witness, says that one Beebe & Smith was put up at Coldwater the last of April, 1865. Int. 70, p. 29, and 91, p. 31, where 1875 is a clerical error for 1865. And that he found one there when he went there. Int. 69, p. 25. We have, then, two machines in use from May 1, 1865, to Nov., 1868—three years, six months —equals one machine for seven years.

"5. ELKHART. Two Beebe & Smith machines were used from Feb. 18, 1862, to Nov., 1868—six years, eight months and ten days—equal to one machine for thirteen years, four months and twenty days.

Two Beebe & Smith machines were used from Aug. 1, 1862, to Nov., 1868—six years and three

months—equal to one machine for twelve years and six months."

"NOTE.—Defendant is given the benefit of having used two machines from Feb. 18 to August 1, 1862. *J. Redmond*, Former Record, p. 484. And see *Turril's* Dep."

This is probably as near the truth as we can get, and would give us one machine for 25 years, 10 months and 20 days.

"6. KENDALLSVILLE. One Beebe & Smith was used from January, 1864, to January, 1868, 4 years.
John B. Stuart, Ints. 65, 6, p. 25.
D. Ferenbeck, Former Record, p. 279."

But *Stuart* says they stopped mending by hand in this division in the *fall* of 1868, Ints. 78 and 88, pp. 26, 27, which would make one machine for 4 years, 9 months.

"7. LAPORTE. One Beebe & Smith was used from February 18, 1865, to November, 1869; 4 years, 8 months and 10 days.

One Bayonet Vise from Aug. 1, 1865, to Nov., 1869, 4 years and 3 months.

James Haverly, Dep., Ints. 7, and 12, *S. H. Turrill*. *Haverly* says to Int. 14 that the B. & S. was used very little, but they are credited full time."

But *Haverly* thinks the Beebe & Smith was put there from 1863 to 1865, Int. 13, and that there were two of the Bayonet Vise, Int. 24, put there between 1863 and 1865; Int. 10. And *Andrews*, also, plaintiff's witness, says he used the Beebe & Smith at LaPorte from 1857 to 1869. Ints. 4, 5 and 6, p. 34.

But assuming that the Beebe & Smith was not used till Feb. 18, 1862; from that date to Nov., 1869, is 7 years, 8 months and 10 days.

And two Bayonet Vises, from Feb., 1864, to Nov., 1869, equal one machine for 11 years, 4 months and 20 days.

This completes the master's statement, to which, however, must be added the machine at Hudson, used five years, which, as we have already seen, was erroneously counted among the infringing machines.

Even with this we have only 18 non-infringing machines accounted for, viz: 4 at Adrian; 1 at Monroe; 2 at Wauseon; 2 at Coldwater; 4 at Elkhart; 1 at Kendallsville; 3 at La Port, and 1 at Hudson; whereas *Redmond* says there were 24 in all; Former Record, p. 484, Int. 9; and this is confirmed by *Brennan*, p. 487, Int. 11.

Leaving these six machines entirely out of the account, the following summary will show the number of the infringing and non-infringing machines respectively, according to our corrected calculation:

Of the infringing machines there were

At Adrian,	1 machine for	29 yr.	1 mo.	and 10d.	
" Coldwater,	" " "	5	4		20
" "	" " "	13	0		20
" La Porte,	" " "	30	9		10
" Kendallsville	" " "		10		15
Total,		79 yr.	2 mo.	and 15 d.	

And of the non-infringing,

At Adrian,	1 machine for	20 yr,	mo.	and	d.
" Monroe,	" " "	12	6		
" Wauseon,	" " "	11	8		
" Coldwater,	" " "	7			
" Elkhart,	" " "	25	10		20
" Kendellsville,	" " "	4	9		
" La Porte,	" " "	7	8		10
" "	" " "	11	4		20
" Hudson,	" " "	5			
Total,		104 yr,	10 mo	and 20 d.	

From which it appears that instead of the non-infringing machines being only 80-196 of the whole, as found by the master they were 104-183; which would make the amount to be deducted, even on plaintiff's theory, $126,540, leaving as the final amount due, $96,121.89.

We can not think the court was justified in deducting only half of the difference between the master's statement and that above presented. According to the strictest letter of the law defendant was entitled to the whole ; and, in view of the enormity of the damages, the loose and conjectural way in which they were estimated, and the objections above urged to the rule adopted, it would seem that no court could hesitate to make that deduction.

II.

But there is still another, and yet more vital error in the master's account. The period covered by this accounting purports to begin, as already stated, Feb. 18, 1862, when the plaintiff first became owner of the patent. For the rails mended prior to that date, the plaintiff, having since obtained further assignments, has commenced another suit, which is now pending in the circuit court. It would, of course, then be unjust to allow him to recover in this suit for any portion of those rails. There is no difficulty in determining the number of rails mended by defendant subsequent to that date, for the answer, which is the only evidence on this point, states the number of rails mended every year except the last. On page 15 of the Former Record in this case we find that the rails mended In the year ending February 28, 1863, were 55,596.

"	"	"	"	"	1864,	"	50,606.
"	"	"	"	"	1865,	"	57,021.
"	"	"	"	"	1866,	"	52,417.
"	"	"	"	"	1867,	"	66,898.
"	"	"	"	"	1868,	"	64,554.
"	"	"	"	"	1869,	"	60,979.
				Making a total of			408,131

After this they mended fewer rails on these hand machines, but assuming that they continued mending at the same rate, we have 40,630 as the number mended during the eight months from Feb. 28, 1869, to Nov., 1869, which added to 408,131, gives us as the total number 448,761. But from this we must deduct one-fourth, 112,190 on account of rails simply cut off without being patched, which leaves as the whole number of rails patched, 336,571. Add one-half, 168,285, for 18 inches mend per rail, and we have in feet 504,856. But as we have just seen, only 79-183 of these were mended on the infringing machines, equal to 217,943 feet. Multiply this by 36 cents, the saving in cost of mending per foot, and we have, as the final saving by defendant during the period covered by the report, $78,459.48, instead of $113,952.17, as found by the court.

And in this estimate it must be noted that we have conceded what we might well have denied, *viz.* That the Cawood machine was in all respects as good as the rack & pinion machine used by defendant. The fact is, however, that it was not nearly so good. This is proved conclusively and without any attempt at contradiction, by no less than three witnesses. Thus Mr. Paine says that they used one or two Cawoods at LaPorte in the earliest

working there; but they were superseded in 1858 by the Rack & Pinion, because it was much the most satisfactory, for the convenience of the workmen, and the firmness with which it held one jaw to the other; while the Cawood was regarded as an awkward machine for the men to operate, and not liked as well as the other. Ints. 10–15, p. 48.

BEEBE says that when the men came down with the sledge on the Cawood, the bolts would fly, and then the machine was down, and the fire would lay idle a day, and sometimes two, to repair the breakage; and this was what drove him to study what improvements to make. That his machine worked the best, and after its introduction on the Michigan Central, they threw the Cawoods aside, or melted them up. Ints. 29—31, p. 41, 42.

SMITH says the same. Ints. 21—29, p. 54, 55.

Now it will not be pretended that the plaintiff is entitled to the increased advantage due to these improvements, made by others; and this fact ought to be considered in determining how much the defendant has saved by the use of the Rack & Pinion machines.

The above estimate is insisted on by the defendant with the fullest confidence, as being the utmost that can be claimed by the plaintiff, on the view of the case thus far presented.

III.

There is yet another point to be considered, which, if determined in favor of the defendant will still further reduce this amount. We refer to the standard of comparison. On the former accounting the comparison was made between the Cawood machine

and the old swage block. The Beebe & Smith, the Michigan Southern, and Bayonet Vise machines were all held to be infringements, and as such were, of course, excluded from consideration.

But now this court having decided that these three machines are not infringements, the question arises whether the comparison should not be made between them and the Cawood. If not, it must be simply because these machines were not invented till after the Cawood. The point then the court is called upon to decide is, whether in estimating the profits made by the use of a patented device, we must compare that device with what was known before, or may we extend the comparison so as to embrace devices known at the time of the infringement, though not known at the time of the plaintiff's invention?

The plaintiff here contends that the comparison can only be made with what was already known, and that nothing can be considered that was found out subsequent to the invention of the patentee. The argument in support of this doctrine is:

First. That on the opposite doctrine the value of the patent would be wholly destroyed by any subsequent, independent invention, that is, an invention that was not an infringement, provided it was equally useful.

Second. That it is no answer for a defendant who is sued for infringing a patent, to say that there was another device equally good which he had a right to use. That if he did not see fit to use it, but did use the patented device, he must pay accordingly. That, if a man ride over my turnpike, he can not excuse himself from paying, simply because there was a public highway on which he might have ridden if he had so chosen.

Third. That, if subsequent inventions are to be admitted for this purpose, the rule will be constantly changing, and the result would be endless confusion.

Fourth. That the novelty of a patent is always determined by what preceded it.

The main defect in this argument is that it entirely loses sight of the distinction between law and equity, now well settled in patent cases, and of the theory on which defendant's profits are awarded to the complainant. At law the plaintiff recovers his damages without regard to the defendant's profits, and without asking whether the defendant has made any profits or not. In that respect a suit for infringement of a patent is like any other suit for the conversion of personal property. But when we come into *equity* we find there an entirely different rule. The rule there is to give the plaintiff the *profits* the defendant has made by the use of the invention. That at least is the primary rule. If defendant has made no profits then the plaintiff may have his damages instead.

Again, the plaintiff has his election where to sue. He may sue at law for his license fee, or whatever else may constitute the measure of his damages, or he may sue in equity for the defendant's profits. But in the latter case he must be prepared of course to prove that the defendant has made profits. If the defendant has made no profits the plaintiff can recover none.

These profits are got at in various ways. Where the defendant *sells* the patented device the plaintiff is entitled to the profits derived from the sales, to be estimated as merchants ordinarily estimate their profits. Where defendant simply *uses* the device,

the profits are got at by seeing what advantage he has derived from such use, over and above what he would have derived from the use of any other device he had a right to use, and equally fitted for the purpose.

The defendants here occupy this latter position. Rails, it is said, can be mended much cheaper on plaintiff's machine than on any other machine which defendants had the right to use. This saving represents their profits, and those profits in equity belong to the complainant.

This rule of law is too familiar to require either authority or argument, and as thus stated it completely disposes of the plaintiff's objections.

First. The value of the patent is not destroyed by thus admitting subsequent inventions into the comparison, for the patentee can always sue at law for his damages, and there no such comparison can be made. Or under the law as it now is, he can recover those damages in equity, provided there are no profits or those profits do not equal his damages. That the value of his patent may in some cases be thereby greatly diminished we freely admit, but there is no injustice in that. The value of patent property is always liable to be diminished in this very way, that is, by subsequent inventions. If *A* makes an invention to-day, and *B* makes another just as good for the purpose, and not interfering with *A* to-morrow, *A's* invention must of course fall in value, and it is right that it should. In such a case it is clear he has done little for the public; he is only one day ahead of *B*. If he had made no invention to-day the public would have had *B's* all the same to-morrow.

Second. The complainant's next argument is bad

because it proves too much. If it is no answer for the infringer to say "There was another machine I might have used"—if there is any force in the rejoinder, "Then why did you not use it?" all this is equally applicable to machines existing before his invention. This was the very argument, in fact, made by plaintiff's counsel in *Mowry* v. *Whitney*, 14 Wall. 639. That there is great force in the argument can not be denied. It can not be denied that the rule is anomalous, and in many cases inconvenient, expensive and unjust. The accounting rendered necessary by it in this very case consumed years of time, and cost tens of thousands of dollars. We should be very glad to see this court reform it altogether. Neither patentee nor infringer would be found to say a word in its defense. But unfortunately it is to-day the law of the land, and it is the law of this case. If it is a good rule as to devices known prior to the patentee's invention, it is a good rule as to those that come after.

The plaintiff's illustration as to the turnpike is really an argument against him. It would be no answer *at law* for the traveler on the pike to say, there is another road on which I might have gone free; but surely it could make no difference as to this whether the turnpike was built before the high road or after it. The answer would be just as bad in the one case as in the other. And it would be just as bad in regard to a patent if the patentee chose to sue at law. But if, on the other hand, we can imagine the owner of the turnpike suing the traveler *in equity*, with a view to recover the profits or saving the latter had made by going on the turnpike instead of the high road, then, as every one must admit, this answer would be perfectly good in either

case, that is, whether the turnpike or the other road had been first built.

The question in all these cases is what has the defendant saved by the use of the patented invention? How much better off is he than he would have been if he had used something else instead? It is not of the slightest importance when this something else was invented, whether before or after the plaintiff's invention. It is enough if it was known at the time of the infringement. If it was then known, and the defendant had a right to use it, it is perfectly certain that he has saved nothing more than he would have saved if the machine in question had been known a thousand years. To say that the amount of his saving depended in any way on the date of invention would be in the highest degree absurd.

In all this there is no injustice to the patentee. He is not compelled to sue in equity. He can always sue at law, and there he may recover, whether the infringer has made any profits or not.

Once more, the decisions on this question, though not conclusive, all go to sustain our view.

Thus in Mowry & Whitney, 14 Wall. 651, the court says: "The question is, what advantage did defendant "derive from using plaintiff's invention over what "he had in using other processes then open to the "public, and adequate to enable him to obtain an "equally beneficial result." "Then open to the public" can mean nothing unless it means the time of use.

In *Serrill* v. *Collins*, 4 Blatch. Ingersoll, J., 1857, it was held that the rule is to give the profits derived by defendants by the use of plaintiff's machine over any other mode they had a right to

adopt. Nothing was said there as to the time of invention—if defendants had a right to adopt it, that was evidently considered enough.

In *Black* v. *Thorne*, Off. Gaz. 7–176, Blatchford, J., it was held that the comparison was to be made between plaintiff's device and other devices equally good and open to the public and defendants, *at the time they used the patented improvement.* This form of expression is used no less than four times in the opinion of the court, and could hardly have been so used inadvertently.

In *Knox* v. *Great Western Quicksilver Mining Co.* 14 Off. Gaz. 898–9 Sawyer, J., 1878, it is said that the comparison must be with machines free to be used *at the time of the infringement.* The question was fairly before the court, defendant having claimed that a machine not invented till after the infringement had continued a long time, should be taken as the standard from the beginning.

In *Conover & Rapp*, 4 Fisher, 63, a case at law, where defendant's profits, however, were taken as the damages, it is assumed that if defendant had had a right to use any other patent for splitting wood, that should have been considered. Ingersoll & Nelson, JJ.

And in this very case the circuit court has said, "We admit that if *at the time of their use* there appeared to be any other methods of repairing the rails, then the damages of the plaintiff might be the difference between the least expensive of those methods and that of the plaintiff's machine, because that would be the advantage which the defendants derived over any other appliance then open to them, and by which the rails could be mended equally well." Former Record, p. 871.

If this view is correct the defendant made no savings during any of the time when it had a right to use the Beebe & Smith, the Michigan Southern, or the Bayonet Vise machine, and the decree, of course, should be reversed.

It is suggested further, however, that as the Springfield Bayonet Machine was known long before the Cawood invention, and could have been used, as it in fact afterward was used, for mending rails, with only an immaterial alteration, that machine should be adopted as the standard of comparison; in which case there would be no profits, and all the plaintiff could recover would be his license fee.

As to this, this court says in its former opinion, that both the Bayonet Vise and Michigan Southern Machines "were manifestly copied from the Springfield machine." 94 U. S. 705. "They have all the parts "and substantially the arrangement and combina- "tion of the Springfield machine, and in principle "are identical with it; the only appreciable differ- "ence being in the shape of the jaws." Ib. 706.

But if two machines are identical in principle, if they have the same parts and substantially the same arrangement and combination, they are necessarily the same. It follows, therefore, of course, that the Bayonet Vise and Michigan Southern machines were practically the same as the Springfield, and that defendants, therefore, made no savings at any time by using the Cawood.

It is objected, however, by the complainant, that it would be contrary to the mandate and opinion of the court to adopt any other standard of comparison than the old swage block; or, in other words, that defendants must pay the complainants two or three hundred thousand dollars that do not belong to him

simply because of some real or supposed technical rule of law that forbids them from raising this point at the present stage of the case.

If this particular question had been passed upon by this court, if it had been decided that these machines, being subsequent to the Cawood, could not, therefore, be regarded in estimating the defendant's profits, there would, of course, be nothing more to say. But this court has done nothing of the sort. On the contrary it has remanded the case to the Circuit Court "for such further proceedings in conformity with the opinion of this court as according to "right and justice, and the laws of the United States, "ought to be had, the said appeal notwithstanding."

But it would not be in conformity with the opinion of this court to disregard that part of it that holds the Beebe & Smith, the Bayonet Vise, and the Michigan Southern machines no infringement of the Cawood patent, but distinct and independent inventions; or to fail to follow out that opinion to all its necessary and legitimate conclusions. The Circuit Court held all these machines to be infringements, and consequently not admissible as standards of comparison. This court has reversed that finding, and by so doing has made them admissible. It has said in effect to the Circuit Court:

"You have made your decree on the mistaken "theory that these machines were all infringe-"ments; we, therefore, reverse and remand the "case, so that it may be tried over again on the "correct theory, viz., that they are no infringe-"ments."

But this the circuit court has not done; that is, assuming that a subsequent independent invention may be made the standard of comparison, or that

the Springfield machine is substantially the sa
the Bayonet Vise.

The mandate here would seem to need no
pretation, but if it does, "it is to be interp
"according to the subject matter to which
"been applied, and not in a manner to cause
"tice." *Story* v. *Livingston*, 13 Pet. 373; *Ro*
Co. v. *Soutter*, 2 Wall. 510.

IV.

The allowance of interest on the damages p
the final decree has been repeatedly held b
court to be improper. *Silsby* v. *Foote*, 20 How
Mowry v. *Whitney*, 14 Wall, 653; *Littlefield* v.
21 Ib. 229; *Parks* v. *Booth*, 102 U. S. 106.

It is true the court says, in one or more of
opinions, that cases *may* arise in which it wo
proper to allow interest; but no such case, so
we are aware, has yet risen, and certainly this
one of them. It must, we think, be admitte
the Cawood patent, if valid at all, was of
tremely doubtful character, and that defen
were fully justified in contesting it, especia
view of the Angle Iron machine, until its va
had been established by this court.

Finally it is suggested that, the plaintiff h
died, these suits must both abate.

A suit for infringement is plainly an acti
tort. The common law action most akin to i
action of trover. But at common law an act
trover can not be maintained by an adminis
In Illinois, and probably in most or all of the
this is remedied by special statute; but such st
can confer no rights in this case, nor is there a
of Congress to meet the emergency. The act

provides that suits are "to be brought in the name "or names of the person or persons interested, "whether as patentees, assignees, or grantees of the "exclusive right within and throughout a specified "part of the United States." Act of 1836, § 14.

And the same language is used substantially in section 59 of 1870, and 4919 of the Revised Statutes of 1874.

There are other provisions authorizing the issue of a patent, or its extension to an administrator, but none giving him authority to maintain a suit.

If defendants had sold the plaintiff's property, plaintiff might perhaps waive the tort and sue in assumpsit; but there has been no sale in this case, and an action of tort is the only remedy.

In accordance with this view it was held by McKennon, J. in *Schreiber* v. *Sharpless*, Chicago Legal News, June 2, 1883, p. 311, that in the Federal Courts, when the jurisdiction of the court arises out of the cause of action, the right of action terminates with the death of the defendant.

17 Fed. Rep. p. 589.

Section 955 of the Revised Statutes was there relied on by the plaintiff, but the court said, "The purpose of the section is to give effect in the Federal Courts to State Statutes, as to causes of action cognizable in the State Courts, and in which the Federal Courts obtain concurrent jurisdiction by reason of the citizenship of the parties.

So, in *Smith* v. *Baker's Administrators*, 5 Off. Gaz. 496, it was held by the same judge that suits for infringement survive because of the defendant's being a trustee. But this court having decided that the defendant is not a trustee, the reason fails.

Finally, in *Gaylor* v. *Wilder*, 10 How. 477, this court says :

"The monopoly" (in an invention) "is created by act of Congress, and no rights can be acquired in it unless authorized by statute, and in the way the statute prescribes."

There is no question of course, but that the action ought to survive, and that Congress ought so to have enacted; but the question still remains whether, in the absence of such enactment, it is competent for the courts to supply its place.

We come next to the case of

THE ILLINOIS CENTRAL RAILROAD.

An entirely different method was here adopted by the master. Instead of reckoning up the *number of machines*, he has estimated the amount of saving resulting to defendant from the use of the Beebe & Smith, and Bayonet Vise machines, and deducted that from the former finding. We find here no such errors in calculation as those first pointed out in the case of the Michigan Southern Road; but the same error exists as to the number of rails repaired.

Thus, turning to page 38 of the former record, we find that the whole number of rails mended and cut, from 1856 down to Nov., 1869, was 221,939; and from 1856 to 1861, 75,087; from 1861 to Nov., 1869, 146,852, which multiplied by 17.71, the number of inches to a rail, gives 2,600,748.92 inches; or dividing by 12, 216,729 feet. Add for frogs, as on p. 39 of former record, 24,602 feet, and we have total feet 241,331. Deduct ¼ for cut rails 60,332—180,999, multiply by 36 cents, $65,159.64. Deduct for non-infringing machines, p. 11, $2,802.78, and we have left $62,356.86, as the amount due from this defendant, on the theory of complainant; the very utmost that ought on

any theory to be allowed, and vastly in excess, as we believe, of the demands of justice.

But again, the same error as to the standard of comparison already noted in the case of the Michigan Southern Road also exists here. The Illinois Central Road had the right to use the Michigan Southern, or the Bayonet Vise machine, during a large part of the time covered by this accounting. The Michigan Southern machine was introduced in 1864; hence from that time it is impossible to claim that the defendant made any saving by the use of the Cawood, it being admitted that the Michigan Southern was as good as the Cawood, and entirely free for defendant to use. In no event, therefore, is defendant chargeable with any savings after 1864; and if the court shall hold that the Michigan Southern, and Bayonet Vise machines actually existed in the old Springfield Bayonet machine, from which they were copied, and with which the court says they were identical, then defendant has never made any saving at any time, and plaintiff, of course, can recover nothing; nothing, that is, except his license fee.

The same questions, as to interest, and abatement of the suit, arise also in this case.

For the errors above indicated we ask that these decrees be reversed. And if the court shall conclude that the cause of action does not survive, we ask also that both suits be ordered to abate.

GEORGE PAYSON,
Counsel for Appellants.

IN THE

Supreme Court of the United States.

October Term, A. D. 1883.

ILLINOIS CENTRAL RAILROAD CO., *Appellant*,
vs.
SAMUEL H. TURRILL, *Appellee.*
No. 112.

M. S. & N. I. RAILROAD COMPANY, *Appellant*,
vs.
SAMUEL H. TURRILL, *Appellee.*
No. 113.

Appeals from Northern District of Illinois.

BRIEF FOR APPELLEE.

CHAUNCEY SMITH, Boston.
LESTER L. BOND, Chicago,
Counsel.

1884.

E. B. Stillman, Printer, 229 State St., Chicago.

Supreme Court of the United States.

October Term, A. D. 1883.

ILLINOIS CENTRAL RAILROAD CO., *Appellant*,
vs.
SAMUEL H. TURRILL, *Appellee.*
No. 112.

M. S. & N. I. RAILROAD COMPANY, *Appellant*,
vs.
SAMUEL H. TURRILL, *Appellee.*
No. 113.

BRIEF FOR APPELLEE.

HISTORICAL—M. S. & N. I. R. R. CO.

The Cawood patent was issued September 9, 1856. During this and the following years of 1857-8, the machine went into extensive use, and litigation to prevent this corporation from infringing the patent was commenced in 1861. The validity of the patent was established by this Court at its term for

1863, as appears from *Turrill vs. Michigan Southern R. R. Co.* 1 Wall., 491. Proceedings were then changed from the common law to the Equity side of the court, and the contest with this Company has been continued from that day to this. This cause having been once before this Court, as appears from 94 U. S. 695, (4 Otto), the result of the contest has been that the Company continued its infringements, in spite of this Court, until it was pleased to discontinue upon finding a machine of greater capacity.

Appellant has succeeded in reducing the amount $965,115, found originally by the Master, down to the amount now in controversy. The amount originally found by the Master, was undoubtedly under the true amount of the actual saving, made by appellant in using the invention of the patent. The Court below, however, without giving special reasons therefor, (which fact is commented on by this Court in 94 U. S.) reduced the amount to $222,661.89, the only reason for reducing it found in the record, being the amended Answer of the defendant, claiming that one-fourth of the rails mended had been cut off, instead of being repaired by the use of these machines. This latter finding of the Court, this Court, acting as Master and reviewing the whole testimony, approved with a single exception, that the account as then stated, included work done on machines which were non-infringing, and the case was sent back to deduct from this finding the amount of work actually done on non-infringing machines, and, as appellee understands it, for that purpose and no other. The Court below had nothing to do but to execute the mandate of this Court, and if it discharged its duty properly, its judgment must stand as in effect the judgment of this Court, and this Court will assume that the Court

below did its duty, and it is for the appellant to show that it failed to do so.

POINTS IN CONTROVERSY.

Appellee does not assent to the statements of appellant, as to the errors and points of fact or law involved in these cases.

All that is involved for the proper disposition of these cases is, whether the proper deductions from the original decree have been made.

The cases were not sent back generally, but for the special purpose set forth in the mandate and in the opinion of the Court.

The mandate directs that further proceedings be had in accordance with the opinion of the Court.

The Court, having gone through the record to correct and supply the deficiencies of the Master's report, says, 94 U. S., p. 710.

"It follows from what we have said, that in those cases in "which the defendants have been charged with the profits made "from the use of the 'bayonet vise,' or the 'Michigan Southern' "machine, or the 'Beebe & Smith' machine, the decrees of the "Court are erroneous."

This is the only error found, and it is the only matter to be corrected.

The appellee did not own the machines named, and for this reason only, the work actually done on them is to be deducted.

APPELLANT'S EXCEPTIONS.

Thirty-four exceptions were filed to the Master's Report.

In the Assignment of Errors, the 1st, 5th, 6th, 7th, 10th, 16th and 17th, are omitted. Error is assigned for the overruling of the 2d, 3d, 4th, 8th, 9th, 11th, 13th, 14th and 15th.

The second assignment of error is that the Court erred in partly overruling the 12th, and 18th to 34th, inclusive.

These exceptions will be taken up in their numerical order, and separately considered, although they might be grouped, as a large number of them are mere repetitions with variations.

2d.

This, in terms, is, that the Master has charged appellant with rails mended prior to Feb. 18, 1862.

This exception is imaginary, as the Master specifically states for each machine the commencement of 'from Feb. 18, 1862, to,' &c., and wherever this is varied, it is 'from February to,' &c., making the starting point twelve days later, if any variation was intended.

There is nothing in the Master's report upon which this exception can be based, and there is nothing cited in the argument.

This exception, therefore, is simply gratuitous.

3d.

This exception is, that the Master has charged appellant with the difference in cost between the Cawood and the old swage or flat block.

This exception goes to the original finding of the Court, and not to anything found by the Master. He simply adopted the finding of this Court. The "whereas" of this exception is considered hereafter.

4th.

This is, in substance, that the Master refused to consider the old bayonet machine of 1845 on the measure of profits.

As this Court has already decided that the bayonet machine of 1845 taught no man how to mend rails, and as it is absolutely impossible to mend rails on this machine, this exception goes to the previous finding of this Court, and not to anything found or alluded to by the Master.

8th.

This exception, while it is apparently a long one, is, in terms, only that the Master adopted a false and improper standard in ascertaining the profits.

The Master in this simply followed the finding of this Court in the original case. This exception, like the previous ones, goes to the opinion of this Court, and not to anything found or stated by the Master.

The argument of this exception is considered hereinafter, under the head of "Standard for Measuring Profits or Damages."

9th.

The substance of this exception is, that the Master has *assumed* the Cawood and the rack and pinion machines to be the same, while the evidence shows Cawood to be inferior.

This exception also goes to the finding of this Court, in the opinion under which these supplementary proceedings have been had, and the Master has simply made the assumption which this Court directed him to make. There is no proof that the rack and pinion was a better machine than the Cawood. The proof on this point consists solely of the fact that in one or two original Cawood, the bolts were made so small that they broke, occasionally. This merely goes to the perfection of workmanship, and not to the construction or operation of the machine.

The assumption is on the part of appellant, as this Court has already decided that the two machines are the same.

11th.

This is, in substance, that the Master has attributed to the Cawood, advantages derived from later improvements made on that machine.

This is another assumption on the part of appellant, as this Court has already found the machines to be the same.

There is no proof showing what the additional improvements were, if any.

If there were any, it was the duty of appellant not only to make proof as to what the improvements were, but also as to their value. *Elizabeth vs. Pavement Co.*, 7 Otto, 126.

13th.

Is, in substance, that the Master found the sum of $131,782.45, to be the amount of appellant's saving, which is too much, on any theory.

This exception should have gone into the class of "partly over-ruled," as the Court did not sustain the report to the amount here stated. It cannot, therefore, be considered in its present form.

It will be considered generally, hereafter, where in following the example of appellant we have restated the account, and from which it will appear that the error was upon the other side, and that this exception should have been, in fact, over-ruled.

14th.

This exception is, in terms, that the finding of the Master was upon partial and incomplete evidence.

This exception is not well taken for the following reasons: first, because it is not correct; second, because it appears from the deposition of Charles Paine, Genl. Supt. of the road, pp. 49, 50, Ints. 29, 30, to 34, that no shop records have been preserved; that if they had, the books would not show the accounts for the machines separately; that what books they had have been sold to the paper mill, and that there are no books by which the account can be specifically determined. The proofs, with the possible exception of Monroe, are positive and clear as to the time in which the several machines have been used; that they were usually in use all of the time; and the time of use is specifically ascertained. Under the opinion and mandate of this Court, it was the duty of appellant to aid in determining the amount done upon these several machines, and not to obstruct such accounting.

If there is anything in this exception, it is to defeat the entire action, whereas, this Court has already decided that a large sum of money is due to the appellee.

15th.

This is the conclusion of, and should have been a part of the 14th, as it is, in substance, that, for the reason stated in the 14th, only nominal damages should have been found.

This Court directed the Master, through the Court below, to deduct from the amount already found, so much of the profits as had been earned by the machines which the patent did not cover.

The Master had no authority to restate the measure of damages.

This exception goes to the finding of this Court for the original case, and not to any finding on the part of the Master, or of the Court below.

EXCEPTIONS PARTLY OVERRULED.

The 13th exception should have been in this class.

12th.

This is, in substance, that the Master found that only $\frac{80}{196}$ of the rails mended, had been mended upon non-infringing machines.

The Court found a larger proportion for appellant, which finding was wrong, as will hereinafter appear, and this exception should have been wholly over-ruled, and not in part only, and the finding for appellant should have been diminished, instead of being increased, as it was.

18th.

This is, in substance, that the Master found the Cawood machines at Adrian, were used for a longer time than they were in fact used.

It is true that Redmond says, the summer of 1869. Turrill, p. 37, Int. 7, says they were used until some time in October, 1869. In appellant's Brief, the time for closing down the non-infringing machines is in all places assumed to be November 1, 1869. The proofs show that all the machines were stopped at about the same time, with the exception of Elkhart, and that they were all stopped somewhere about the last of October, 1869.

This date should be as good for the Cawood as for the non-infringing machines.

This is as near the correct date as can be ascertained, as it appears that the other shops were not stopped when the Bain machine was put in at Elkhart, some time in October, 1868, and in fact, in other sections of the road under the same management, other machines were continued up into 1870 and 1872. Collins F. R.* p. 617, Int. 28.

November 1, 1869, is as near a date as can be arrived at; and is not over time.

Taking the same date for the stoppage of all of the machines does not affect the average between them. In the revision of the account which we have made, we have assumed the date to be Oct. 18th, to avoid the computation of odd days. As the time of accounting commences Feb. 18, 1862, stopping at October 18, brings even months.

*NOTE.—F. R. indicates former record.

Appellant insists on applying the key note of the Aristotleian system of philosophy, that the truth lies in the mean between the two extremes. Upon this theory, as the witnesses frequently say "the fall of 1869," the true time would be October 15, or within three days of the time assumed in our revision.

The specific statement of "in October 1869," should prevail against the general statement of "sometime in the Summer of 1869," particularly as the former appears in old shop books, while the latter is a mere guess.

19th.

The substance of this, is, that the Master allowed for one-half more work on the Cawood than on the Beebe & Smith machines at Adrian, without proof.

It is true that the Master, in Schedule *B*, does say one-half, but it will be seen that while he has taken the highest amount, he has not allowed as much time as the proofs show for the Adrian shops, as will be made to appear hereinafter.

Furnaces were used with the Cawood machines, and were not used with the Beebe & Smith machines. The evidence explains the difference between a furnace and an open fire, and all of the witnesses agree that very considerably more work was done, when furnaces were used instead of open fires. This will appear further on, where the subject is specially considered.

20th.

The substance of this, is, that the Master found two Cawood machines at Coldwater, from Feb. 18, 1862, to Feb. 18, 1866, whereas, the machines went out of use in the fall of 1864.

Dickens, p. 21, Int. 6, says that four Cawood were put into this shop *after* 1857; that one Beebe & Smith was put in after 1865, and the second Beebe & Smith about six months later. Stuart, p. 25, Int. 69, says that he went to Coldwater in 1865 or 1866, and that only one Beebe & Smith machine was there.

These two Cawood machines, which were supplanted by Beebe & Smith machines, were certainly there in the beginning of 1866, and as Feb. 18, is early in 1866, it will certainly be a fair date for the first Beebe & Smith, and the next one six months later, which will make it Aug., 1866.

There is no proof that either of the four Cawood went out prior to 1866.

The date of 1864, or that year, is not mentioned by Dickens, either in terms or inferentially.

21st.

This exception is to extra work done by the use of furnaces, and with the difference of locality is the same as the 19th exception, which is separately considered under the head of Furnaces and Open Fires.

22nd.

The substance of this, is, that the Master found six Cawood machines in use in La Porte, from Feb. 18, 1862, to Feb. 18, 1865, without evidence.

Turrill, p. 37, Int. 6, says that there were six rack and pinions in La Porte at that shop, when he was there December 18, 1861, which is two months prior to February 18, 1862. Haverly, p. 32, Int. 10, says the Beebe & Smith machine

was put in between 1863 and 1865, and that the bayonet vise machine which was at Detroit, was the first one made. Andrews, p. 35, Int. 18, says there was one Beebe & Smith between 1862 and 1869. Haverly, p. 32, Int. 6, says it was a Beebe & Smith that was replaced by a bayonet vise. The witnesses all agree that there were seven machines at this shop. Haverly is uncertain as to whether there was one or two bayonet vise machines, or one Beebe & Smith, (p. 32, Int. 7,) while Andrews, p. 34, Int. 6, is uncertain whether there was one or two Beebe & Smith and one bayonet vise. The evidence is reasonably clear that the six Cawood continued up into the time the bayonet machine was made for the Detroit trial, which took place in June, 1865; that about that time two Beebe & Smith machines came in, one of which was replaced by the bayonet vise, which will leave six Cawood up to the time the first Beebe & Smith machine came in, between 1863 and 1865. From that date onward there was a part of the time two Beebe & Smith, and a part of the time one Beebe & Smith and one bayonet vise machine.

The Master's statement for this shop will be found substantially correct under the evidence.

23rd.

The substance of this is, that the Master found four Cawood machines at La Porte, from 1865 to 1869, without evidence.

According to the evidence, as hereinafter considered, it will be seen that the error of the Master was in not finding five Cawood machines instead of four.

The error of this finding is in favor of the appellant, to the extent of one machine.

24th.

The subject of this is, that the Master found the machine at Hudson to be a Cawood, when he should have found it to be a Beebe & Smith machine.

It is true that Corbus, p. 76, F. R. Int. 29, says the machine at Hudson was a Beebe block, but Corbus, Int. 2, says that he was track master on the road. He also states, p. 65, F. R. Cr. Int. 53, that Michael Wagner was foreman at Hudson. George Wagner, F. R. 655, Int. 9, says the machine had one fixed and one movable jaw. In answer to Int. 12, he calls it a lever block. In answer to Int. 6, he says it only differed from the Cleveland device or Whitcomb machine (which is the rack and pinion machine), in the fact the jaws were rounded instead of being square. Michael Wagner, F. R. 705, Cr. Int. 1, says after they used the jaws they got the machine with a lever. Int. 13, says the jaw block was worked about a year and thrown aside after that. Int. 9, says that they used a common swage block, and after a while they got another block *with a lever*. The two Wagners, who used the machine, thus clearly state that the machine was a rack and pinion machine, and certainly the statement of these two witnesses, that it was what is called a Cawood machine, should prevail against the testimony of one witness, who had no further connection with the shop than to haul rails to and from it.

The Master was clearly right in finding that this Hudson machine was a rack and pinion machine.

The Beebe & Smith machine mentioned by Corbus, was thrown out in favor of the Cawood. The description by the two Wagners is neither uncertain nor ambiguous.

Nowhere in the entire record is the Beebe & Smith ever called a lever block, while it is one of the names of the rack and pinion machine.

25th.

This is, in substance, that the Master erred in finding one Cawood machine at Kendallville, from June, 1864, to January, 1868.

Stuart, p. 25, Int. 65, says they commenced at Kendallville at the same time they commenced at Wauseon; Ints. 66 and 67, that they commenced with the Beebe & Smith, and added a rack and pinion in about six months; and that they continued to 1868, until the Bain roll was started at Elkhart, and they were continued in use during the time he was there.

Ferenbeck, F. R. 279, Ints. 1 and 3, states in January, 1870, that he worked at Wauseon about six years. This would give the Kendallville and Wauseon dates, January 1, 1864. The Master, giving the appellant the benefit of about six months, starts the machine in June, 1864, instead of January. Both of these machines undoubtedly continued in use up to November, 1869, but as the proofs are uncertain, appellant is given the benefit of the starting of the Bain rolls at Elkhart about November 1, 1868. As before stated, it appears from the evidence that the other shops were not shut down, when the Bain rolls were introduced at Elkhart, but that on the contrary, they were all continued on this division up to about November 1, 1869. As before stated, there being two machines, one infringing, and one non-infringing, the relation of each to the accounting would be the same for both machines, and therefore no error would occur in the average or outcome.

The Master is clearly right in his finding in regard to this machine, except that it should have been four years and ten months, instead of three years and six months, and the Master is clearly supported in his finding by the evidence of Stuart and Ferenbeck.

26th.

This is, in substance, that the Master found four Beebe & Smith machines in use at Adrian, from Aug. 1, 1862, to Aug. 1, 1866.

Redmond, p. 28, Int. 5, says the Beebe & Smith machines were put in in the summer of 1862, and run until sometime in the summer of 1867. They were all closed down in 1867, but they were not all discontinued at the same time. Some were discontinued earlier than others.

Turrill, p. 37, Int. 7, testifying after an examination of the books, says four Beebe & Smith machines were put in operation Aug. 1, 1862. Two were stopped April 17, 1865; one July 13, 1867, and that the other one was stopped prior to that date. Redmond, F. R. 484, Int. 11, says the Beebe & Smith blocks were introduced at Adrian, about Aug., 1862.

The Master has evidently equalized the time between the going out of the machines in 1865 and 1867. The time given by him is substantially correct, but if there is any error, the error is in favor of appellant, as he has given the Beebe & Smith machines more than the actual time for the four machines when taken together.

27th.

The substance of this, is, that the Master erred in finding that two Beebe & Smith machines were used in Wauseon from

January, 1864, to January, 1868, while in fact they were used for six years.

This is contrary to the 25th, as it appears that the Kendallville and Wauseon machines were in use for the same time as to the Beebe & Smith, and six months later for the rack and pinion or Cawood. If the true time of the Beebe & Smith machines at Wauseon, is six years, then the true time for the Cawood at Kendallville, is five and one half, instead of four, as found by the Master.

The testimony of Ferenbeck is that he was at Wauseon six years, prior to January, 1870, while Redmond, F. R. 624, Ints. 9 and 10, says that the shops were shut up in 1869. Nov. 1, 1869, is undoubtedly as near the correct date as can be ascertained, without the aid of appellant. It is possible that these machines were continued to Nov. 1, 1869, but if this is true, then the Kendallville infringing machine ran between the same dates.

28th.

The substance of this, is, that the Master found two Beebe & Smith machines at Coldwater from Feb., 1866 to Nov., 1868, but he should have found them put into use earlier.

Dickens, p. 31, Int. 8, says the first Beebe & Smith machine was put in *after* 1865. Int. 9, that a second Beebe & Smith was put in about *six months later*, instead of earlier, as stated in the exception. Feb. 18, 1866, is a fair date for '*after 1865*.' Six months later would be Aug. 18, 1866. There is no evidence that either of these machines was put up in 1865. Stuart, p. 25, Ints. 69, 70, and 71, says that he went to Coldwater in 1865 or 1866; that there were four machines there, and one was a Beebe & Smith, and that he had a Beebe & Smith put up about

a month after he went there. He nowhere gives any date as of May 1, 1865, and the clerical error of Int. 91, p. 27, where he says the Beebe & Smith machine was shipped from Adrian and put up in the last of April, 1875, may as well be a clerical error for 1866 as for 1865.

There is no way of correcting this date, as Stuart is not certain that he went there till 1866. The probabilities are that this is a clerical error for 1867, instead of 1865, as assumed by appellant, for the date of 1867 harmonizes with the other dates given by himself and Dickens.

29th.

The substance of this, is, that the Master found two Beebe & Smith machines at Elkhart from Feb. 18, 1862, to Nov. 1868, and two from Aug. 1, 1862, to Nov., 1868, without evidence, while the answer avers that appellant had four of these machines in use at Elkhart eight years.

The original answer was filed April 6, 1869. The proofs are clear that the Bain machine went into use in Elkhart, about November 1, 1868. All the witnesses agree that it was in the fall of 1868, and that it took the place of the other machines in this shop. Eight years from November, 1868, (taking the answer to be true in this respect), carries the date back to November, 1860, so that on this basis, appellant is to have credit for each machine for one year and four months prior to Feb. 18, 1862, the date at which the accounting commences.

This is probably as near as we can get at the machines of this shop, unless the rule is applied that it was appellant's

business to look after its own deductions, in which case nothing should be allowed for these Elkhart machines. Allowed to stand, the finding of the Master agrees with the answer, except as to two of the machines from Feb. 18th, to Aug. 1, 1862. Otherwise full credit is given for the corrected calculation stated on p. 25 of appellant's brief. The finding of the Master for this shop is adopted in appellant's corrected calculations, and this exception is either not well taken, or waived.

30th.

The substance of this, is, that the Master found one Beebe & Smith machine at Kendallville from Jan., 1864 to Jan., 1868, when he should have found from 1861 or 1862, to the fall of 1868.

As before stated in reference to exceptions 25 and 27, the date of this machine is that given by Ferenbeck for Wauseon.

Stuart, p. 24, Ints. 64 to 67, inclusive, says that he commenced at Kendallville in 1861 or 1862, and that a Beebe & Smith machine was in use, and that about six months thereafter, the rack and pinion machine was put in. He says, Int. 68, that he left there March 16, 1865.

If this exception is correct, then the time for the rack and pinion for Kendallville should be restated, and it should be six years and eight months, instead of three years and six months, as found by the Master. If there is any mistake in regard to this finding, the same mistake exists as to the companion Beebe & Smith machine, and therefore one will counterbalance the

other. The Master in his finding has given appellant the six months later finding; that is, for the rack and pinion three years and six months, and for the Beebe & Smith four years. This exception and the 25th cannot both be well taken, as, if there is any error, it is the same as to both, and to correct them both, according to this exception, makes the one balance the other, without changing the final result found by the Master.

31st.

The substance of this, is, that the Master finds but one bayonet vise machine at La Porte from Aug. 1, 1865, to November, 1869.

Haverly, p. 32, Int. 7, is not clear as to there being one or two bayonet vise machines at this shop. Int. 6, he thinks the bayonet vise machine was put up in the neighborhood of 1865. On p. 33, Ints. 14 and 17, he says this bayonet vise machine is the one that went away to Detroit at the trial. Turril, p. 38, says that the bayonet vise machine was at Detroit in June, 1865, that it was a new machine, and had the appearance of very little use, if any. Andrews, p. 35, Int. 16, says that the patterns were made for this machine at La Porte in the winter of 1865. P. 34, Int. 6, he says that there was but one bayonet vise machine at La Porte. P. 36, Int. 5, he says there were *but two made*. Turrill, p. 38, Int. 12, says he never saw or heard of but three bayonet vise machines, one at Detroit, one at Elkhart, and one on the Illinois Central R. R., made in 1867. The Detroit and the La Porte is the same machine, and the one at Elkhart in 1878, was probably the same machine, as this would agree with Andrews' statement that there were but two ever made, and as the bayonet vise machine used by the I. C. R. R.

at Chicago, is mainly called the Michigan Southern machine, it is fair to presume that this is the second or other machine.

From this it will appear that this bayonet vise machine could not have been put into use much, if any, prior to Aug. 1, 1866, and it was discontinued with the others, Nov. 1, 1869. The Master says 1868, but he finds four years and three months for its use, showing 1868 to be a clerical error for 1869, the true time when its use ceased.

The finding of the Master in respect to this machine, corresponds identically with the proofs.

32nd.

This is, in substance, that the Master found the number of non-infringing machines to have been equal to eighty years eight months and ten days, when the proportion should have been larger.

33rd.

The substance of this, is, that the Master found the number of infringing machines to have been equal to one machine for one hundred and eleven years and ten months, when it should have been less.

This, and number 32, are considered with the

34th, and last.

The substance of this is, that upon the theory adopted by the Master, the result is wrong.

In this exception, appellant changes from *time* and amount,

to *rails* and amount, thus excepting to something which the Master did not report.

The Master reports as the basis of his finding, (p. 11), that he has taken all of the mending in years, and that the time equals one machine for one hundred and ninety-six (196) years, for which $222,666.89, was assessed in the former decree, which was approved as to amount, except for that part of the work which was done on non-infringing machines. The Master's basis amounts to $1,136.05½, per year, per machine, and allowing three hundred days to the year, $3.79 per day, is certainly not an exorbitant finding.

On the Master's basis, the number of rails is not stated, and it is not material, when these supplemental proceedings are connected with the original ones.

CUT RAILS.

On the Master's basis the number of rails cut off is immaterial, and raises a fictitious issue, as the cutting off has already been deducted in finding the amount of the former decree. To again deduct them, is to duplicate the former deductions.

The track masters all estimate the amount of cutting much higher than the shop men do. They say the cutting was about one quarter, while Stephenson, F. R., p. 685, Cr. Int. 1, p. 286, Cr. Int. 12, says that the cutting at Adrian was one rail in ten, and Park, F. R., p. 660, Int. 25, says that the cutting at La Porte was one rail in six.

FURNACES AND OPEN FIRES.

The matter of furnaces is by no means a new one. In the former record, Brennan, p. 610, Int. 59, says that they had four furnaces at Adrian, which were used with the rack and pinion machines. Dickens, p. 22, Int. 17, says that the average between machines, depends on whether they were used at furnaces or open fires.

Corbus, F. R., p. 674, Ints. 33 and 35, says that they mended rails in the middle, after they got a furnace.

Dickens, p. 22, Int. 19, says that he could get from one third to one half more at a furnace, than at an open fire.

Redmond, p. 29, Int. 13, says that you can get from two rails to a half more work with a furnace, than with an open fire.

This Court directed that the actual amount of work done on the non-infringing machines should be deducted from the gross amount. Under this deduction, it became important for the first time to consider this question or circumstance, and actual amounts of mending on the different machines cannot be properly determined without its consideration.

This matter, though not new, is for the first time important, and it is made so by this Court, and not by appellee.

Under equal circumstances, the Master has continued to treat all of the machines as of equal capacity, and he so states the fact. (Last clause on p. 4.)

The savings gained by the use of furnaces, is the same as that by open fires, so that no revision is necessary for this additional mending, but if there is any difference, it is in favor of appellant, as the increased profit was obtained without any corresponding increase in expense, or number of hands employed.

Dickens, p. 24, Int. 52, says that with furnaces they could make quicker and longer heats, and put on longer patches.

Redmond, p. 30, Int. 34, describes the construction and operation of the furnaces.

RE-STATEMENT.

A re-statement of the accounting, shows that the Court erred in cutting down the amount found by the Master.

ADRIAN.

Redmond, p. 28, Int. 5, says that the rack and pinion machines were in use from Feb. 18, 1862, to "Summer of 1869, I think."

Brennan, F. R., pp. 487–8, Ints. 14, Cr. 13, says that the machines were put in in the fall of 1856.

Turrill, p. 37, Int. 7, from an examination of some old shop books, says that there were four put in use in the fall of 1856, "and were discontinued in the month of October, 1869."

Brennan F. R., p. 610, Ints. 59 and 60, says that they had four furnaces and four open fires, and that the rack and pinion machines were used at the furnaces, and the Beebe & Smith at the open fires.

Dickens, p. 22, Int. 14, and Redmond, p. 29, Int. 12, both make the same statement.

Corbus, F. R., 674, Cr. Int. 34, says "until 1864, when we got these blocks, (Beebe & Smith) we got furnaces."

Turrill, p. 37, Int. 7, says that these blocks were put in in August, 1862, one started August 1, 1862.

Turrill, in the same answer, says that two of the Beebe & Smith machines stopped April 17, 1865; one July 13, 1867, and one prior to this last date.

From the evidence we find for this shop as follows.

INFRINGING MACHINES.

4 from Feb. 16, 1862 to Oct. 18, 1869,	7 yrs, 8 mths	
or,		
Equal to one machine,	- - -	30 yrs. 8 mths.
¼, ½, average 3/8. 3/8 of 4 machines from Aug. 18, 1862 to Oct. 18, 1869, equals 12/8, or 1½ machines for	7 yrs. 2 mths,	
or,		
Equals one machine for	- - -	10 yrs. 9 mths.
Total, one machine for	- -	41 " 5 "

NON-INFRINGING MACHINES

2 from Aug. 1, 1862 to Apr. 17, 1865,	2 yrs. 8 mths. 17 days	
or,		
Equals one machine for	-	5 yrs., 5 mths, 4 days.
1 from Aug. 1, 1862 to July 13, 1867, is		
One machine for	- -	4 " 11 " 13 "
1 from Aug. 1, 1862 to June 1, 1867, is		
One machine for	- - -	4 " 10 "
Total, one machine, for	-	15 " 2 " 17 "

LA PORTE.

Park, F. R., p, 660, Int. 7, says that from five to seven fires were kept running.

Haverly, p. 32, Int. 6, says that they had two rack and pinion machines in 1857, and added two or three more. Int. 7, that there were seven in all, four or five rack and pinion, one Beebe & Smith, and one or two bayonet vise, but he is not quite certain as to the numbers. Int. 10, that the Beebe & Smith was put in between 1863 and 1865. Int. 6, that the bayonet vise was put in in the neighborhood of 1865. P. 33, Ints. 14-17, that the bayonet vise which was at Detroit, was the first one, and that the Beebe & Smith was but little used. Int. 23, that a Beebe & Smith machine was supplanted by the bayonet vise.

Andrews, p. 34, Int. 6, says that there were four or five rack and pinion machines in use from 1857 to 1869. Int. 11, shop was closed in the fall of 1869. P. 35, Int. 18, that one Beebe & Smith machine was in use from 1862 to 1869. Int. 16, that the patterns for the bayonet vise were made at La Porte in the winter of 1865. P. 33, Cr. Int. 1, that he superintended the building of machines. Cr. Int. 5, that only two bayonet vise machines were made. P. 35, Ints. 6-8, that five of the seven machines were Cawood.

Turrill, p. 37, Int. 6, says that on Dec. 18, 1861, there were six Cawood machines in use at La Porte. P. 38, Ints. 11-13, that the bayonet vise machine was at Detroit in June, 1865, and that it then showed signs of but little use.

From this it is evident that the most favorable showing for appellant, is, that there were five Cawood machines

in continuous use from Feb. 18, 1862, to the fall of 1869, say Oct. 18; two Beebe & Smith machines to about July, 1865, and one Beebe & Smith, and one bayonet vise, from June, 1865 to Oct. 18, 1869, or two non-infringing machines for the whole period.

The account, then, stands as follows:

INFRINGING MACHINES.

5 from Feb. 18, 1862 to Oct. 18, 1869,	7 yrs. 8 mths.	
or,		
Equals one machine for		38 yrs. 4 mths

NON-INFRINGING MACHINES.

1 Beebe & Smith from Feb. 18, 1862 to Oct. 18, 1869,	7 yrs. 8 mths.	
1 Beebe & Smith continued by a bayonet vise for same time,	7 " 8 "	
or,		
Equals one machine for		15 yrs. 4 mths.

COLDWATER.

Dickens, p. 21, Int. 6, says that four rack and pinion machines were put in after 1857. Int. 8, that one Beebe & Smith was put in *after* 1865. Int. 9, that another Beebe & Smith was put in about six months later. Ints. 19-20, that two furnaces were used three or four years.

Stuart, p. 25, Int, 69, says that there were four machines at Coldwater in 1865 or 1866, that two were rack and pinions, one Beebe & Smith, and is not certain about the other. Ints. 70, 71, 72, about a month after he went there, a Beebe & Smith was put in; that there were then two rack and pinion machines, and two Beebe & Smith's. If Stuart put out a rack and pinion machine, then there were three of them up to 1865 or 1866. There is no positive proof that this shop was shut down before the fall of 1869, when all the others were except Elkhart, but appellant is given the benefit of the doubt on Stuart, p. 26, Int. 77. It seems clear that there was four Cawood machines in this shop up to some time in 1866. Feb. 18, 1866, is a fair average of the dates stated for the first Beebe & Smith.

The correct account for Coldwater therefore is:

INFRINGING MACHINES.

2 from Feb. 18, 1862 to Oct. 18, 1868,	6 yrs. 8 mths.		
or,			
Equals one machine for - -	13 yrs. 4 mths.		
1 from Feb. 18, 1862, to Feb. 18, 1866, is,			
One machine for - -	4 "		
1 from Feb. 18, 1862, to Aug. 18, 1866, is			
One machine for - -	4 "	6 "	
2 furnace 3½ years,			
Equals one furnaee for	7 yrs.		
⅜ equal one machine for -	2 "	7 "	15 days
Total, one machine for -	24 "	5 "	15 days

NON-INFRINGING MACHINES.

1 from Feb. 18, 1866 to Oct. 18, 1866, is One machine for - - -	2 yrs. 8 mths.
1 from Aug. 18, 1866 to Oct. 18, 1868, (6 mths. later), is One machine for - - -	2 " 2 "
Total, one machine for - -	4 yrs. 10 mths.

KENDALLVILLE.

Stuart, p. 25, Ints. 64 to 67, says that work was commenced in 1861 or 1862, the same time that it was commenced at Wauseon, with one Beebe & Smith, and that a rack and pinion was added about six months later.

From this date both machines were in use together. Counsel for appellant, Brief p. 25, claims four years and nine months for the Beebe & Smith machines.

Allowing this, then the account stands:

1 infringing machine,	4 yrs., 3 mths.
1 non-infringing machine,	4 " 9 "

HUDSON.

The machine used at this shop was fully considered in relation to the 24th exception, and it is not here repeated. This machine was undoubtedly an infringing machine. Appel-

lant, Brief p. 25, accepts the Master's finding for this machine, five years.

WAUSEON.

The Master's finding for this shop is as near correct as can now be ascertained.

This shop, and that at Kendallville were in operation during the same period of time. Stuart, p. 35, Ints. 64 to 67.

Ferenbeck testifying in January, 1870, says: F. R. p. 279, Int. 5, that he went to Wauseon "about six years ago." Six years from that date, would be January, 1864. Starting with this date, and closing Nov. 1869, as assumed by appellant, gives the 11 years and 8 months claimed by appellant for these two machines. If we take appellant's Wauseon computation for Kendallville, then the Master should have added another year for the infringing machine of that shop, but if we take the Master's computation for both shops, then the Master was right in allowing only eight years for the Wauseon shop, as he did. Appellant cannot be right for both shops.

The finding of the Master of two machines for four years, or one for eight years, harmonizes with appellant's computation for Kendallville.

Accepting, for this shop, appellant's revised computation, Brief p. 25, we find that the general result is not materially changed.

ELKHART.

As appellant accepts the Master's finding for this shop as one machine for 25 years, 10 months and 20 days, it need not be further considered.

From this consideration of the exceptions and the evidence, we find the statement of the actual work done to be:

For infringing machines reduced to one machine.

Adrian,	41 yrs.,	5 mths.		
La Porte,	38 "	4 "		
Coldwater,	24 "	5 "	15 days	
Kendallville,	4 "	3 "		
Hudson,	5 "			
Total,	113 "	5 "	15 days	

For non-infringing machines reduced to one machine:

Adrian,	15 yrs.,	2 mths.	17 days.
La Porte,	15 "	4 "	
Coldwater,	4 "	10 "	
Kendallville,	4 "	9 "	
Wauseon,	11 "	8 "	
Elkhart,	25 "	10 "	20 days.
Monroe,	12 "	6 "	
Total,	90 "	2 "	7 "

Allowing the odd days to figure as even months, makes the time 113 years and 6 months and 90 years and 3 months.

In making this revision we have cut off from the Master's time 12 days, stopping at Oct. 18, instead of Nov. 1st, in all cases where "fall" is used, and have averaged the time at furnaces, while we have allowed the time for appellant, as claimed for Elkhart, Wauseon, Monroe, and Kendallville, which gives it 9 years and 7 months more than the Master found, while it gives appellee 3 years and 4 months less time.

The Master's statement, p. 14, when fractions of years are correctly added, gives the entire time 197 years and 7 months, or, in round numbers, 198 years.

Our revision after an elaborate examination of the evidence, makes the entire time 203¾ years for one machine, and this recast of time, made wholly independent of the Master's schedule shows how nearly accurate the master's computation is for the whole time.

The original decree from which the amount for work done on non-infringing machines was to be deducted, was for $222,666.89. Dividing this by the entire time, we have for one machine, one year, $1,192.84. This multiplied by 113½, gives $124,037.75, for infringing machines, and by 90¼ gives $98,-629.14 for non-infringing machines.

From this it will be seen that the Court below erred in averaging the time between the finding of the Master and appellant's revision, which revision is repeated in appellant's brief, as we have seen that the Hudson machine claimed by appellant, was clearly an infringing machine; that appellant's finding of only ten months infringement at Kendallville is absurd; that one of the La Porte machines claimed by appellant as non-infringing was an infringing machine; that the use of non-infringing machines was claimed for appellant for Adrian long after they were shut down; that appellant ignored the actual extra mending at furnaces, and cut down the time of use of infringing machines generally, contrary to the evidence.

Appellee was entitled to a decree for $124,037.75, on a revision of the computation.

The question of interest included, is an immaterial one, as the amount for actual work exceeds the amount allowed by the decree, with interest included, by $5,717, without any interest.

If we take off the 3 years and 11 months allowed extra for non-infringing machines at Wauseon, and the 9 months allowed

for the infringing machine at Kendallville, then we have the result attained by the Master, without any material variation, as a comparison shows the Master to have found 197 years 8 months, and the revised computation, without the extra, shows 199 years, 1 months, a difference of a year and 5 month only.

NUMBER OF NON-INFRINGING MACHINES.

Appellant, Brief, p. 25, says that only eighteen non-infringing machines are accounted for. This would seem to be sufficient, as the Answer says that there were only sixteen in all.

Redmond and Brennan say that there were twenty-four in all, but both state the number from memory, and neither one is able to state their localities.

One fact overlooked by appellant's Counsel is, that Redmond, F. R., p. 484, Int. 2, and Brennan, F. R., p. 486, Int. 2, gives the time covered by their depositions as seventeen and a half years, and about eighteen years.

This carries the time back to 1855, and Brennan, p. 188, Cr. Int. 16, says that the road commenced using the machines in the fall of 1856, leaving ample time for the disappearance of machines.

Redmond, F. R., p. 486, Cr. Int. 10, speaks of a shop at Marion, and p. 29, Ints. 15, 16, says that the shop at Hillsdale was discontinued prior to 1862, but does not know when the shop at Sturgis was discontinued.

We have here three shops that went out of operation so early as not to be mentioned by either party in the accounting, which were evidently included in the general statement of these witnesses, as both went back to the fall of 1856.

The answer, Redmond, and Brennan, all include four bayonet vise machines. Neither party has been able to find them, and

Andrews, the man that made them says that but two were made. (p. 36, Cr. Int. 5.) Only one of these was put into use on this road, and as it does not appear where the one at the Weldon shop on the I. C. R. R. was made, it is reasonable to suppose, from its name, that this is the other one.

The six machines claimed on the evidence of Redmond and Brennan to be missing, are fully accounted for by the discontinuance of three shops, and the non-existance, on this road, of three of the four bayonet vise machines claimed.

It was the duty of appellant to account for these machines, and not the special duty of appellee, because if they existed, they were to be used for appellant's benefit in making deductions.

RAILS MENDED.

As the Court below found that the Master's basis of time computations was correct, and in accordance with the opionion and mandate of this Court, p. 18, we have not paid any attention to appellant's side issue on rails.

ERRORS.

The first, second, and third assignment of errors on the part of appellant are already answered.

In regard to the fourth; that the Court erred in not sending the case back to the Master for a further report, it is only necessary to say that, from the evidence of Paine, the General Superintendent, p. 50, Cr. Ints. 30, 31, 32, such a course would have been futile, and the only result would have been useless delay.

In regard to the fifth: that the Court erred in not presenting any account with its decree, it seems only necessary to say, that fault is here found with the Court for not doing in this particular case what it never does in any case.

INTEREST.

The sixth is, that "the Court erred in allowing the Complainant interest prior to the final decree."

The finding of the Court, p. 19, is as follows: "Wherefore the Court doth find that the said Complainant was, on the said twelfth day of July, A. D., 1879, entitled to a decree against the said defendant" &c. This decree was entered of record March 3, 1880.

The principal question raised on this record is, whether the Court can allow interest prior to the actual entry or enrollment (recording) of the decree, but even this question does not, in fact, arise.

Section 4, 921, R. S., provides that Equity Courts upon a decree rendered for an infringement, may give damages "in addition to the profits, and the Courts shall have power to increase such damages in its discretion" &c.

The ~~penalty~~ increase in this case is given under the name of interest, because the Court found that the appellee was of right entitled to a decree as of July 12, 1879, and this comes clearly within the discretion of the Court.

There is no law better settled than that neither error or appeal lies for that which is within the discretion of the Court.

There are three answers to this assignment of error, aside from the statutes of Illinois.

First, that the Court had a right to say that it found for the complainant at a day prior to the recording of the decree.

Second, that the allowance of the amount named, or any other amount up to three times the amount of the decree, was within the discretion of the Court.

Third, that as the amount allowed is less than the amount due for actual mending, appellant is not injured by the allowance.

Appellant seems to think that this is a case where the equities are all on its side, yet to one who has a "good opinion of the law" it would seem that if there was ever a case where the defendant should be "mulct" this is one of them; for this Court in the December term of 1863 found that the patent was a valid one, as against this same defendant (1 Wall., 491), and reaffirmed this decision in the October term of 1870 (4 Otto, 695), and yet this defendant has continued its infringements in the face of both of these decisions of this court, and has prolonged the contest over twenty years, without the least attention to the patent or the decree of this court, refraining only when it found a better machine.

In view of the fact that this court has already found that the rack and pinion is a Cawood machine, the concession on p. 27, of appellant's brief, is, to say the least, sublime.

LAW OF INTEREST.

There is no particular controversy about the general rule that a Master's report does not draw or carry interest in cases of this class, but the law of Illinois does not make any distinc-

tion in reference to the origin or nature of the cause for which the action is brought, and a Master's report, based upon any cause of action, whether arising in tort or in contract, does carry or draw interest.

Section 3, of chapter 74, of the revised statutes of Illinois of 1874, reads as follows:

"Judgment recovered before any court or magistrate shall "draw interest at the rate of six per centum per annum, from "the date of the same until satisfied. When judgment is en- "tered upon *any* award, *report* or verdict, interest shall be com- "puted at the rate aforesaid, *from the time when made* or ren- "dered, *to the time of rendering judgment upon the same*, and "made *a part* of the judgment. (R. S. 1845, p. 294, Sec. 2)."

The decree entered in this cause is in literal accord with this statutory provision.

Section 966, R. S. (U. S.), in terms, relegates all judgments in civil causes in courts of the United States back to the state law where the court was held, for all matters relating to interest.

The State of Illinois not having adopted a code, conforms its equity practice very closely to the English equity practice, and to that of the Federal Courts. Chapter 90, p. 697, of the Revised Statutes of Illinois, provides for the appointment of Masters in Chancery, and regulates their duties and powers.

Section 39, Chap. 22, p. 202, authorizes the court to refer causes to a Master, who is required to report his action on such reference. There is therefore no question as to what the term "report" refers to, as used in section 3 of chapter 74, hereinbefore quoted in full.

Section 44 of Chap. 22 (title Chancery), makes an Equity decree for money the same for all purposes "as a judgment at law." Sec, 47, of the same chapter provides that Equity decrees for money may be enforced by execution directed to the sheriff or other proper officer, and that such execution "shall have the same operation and force as similar writs issued upon a judgment at law." Sec. 49 contains the following: "Whenever an execution shall have been issued against the property of the defendant, on a *judgment* at law *or in Equity*," &c. This section clearly makes a judgment at law and a decree in Equity the same thing.

Section 7, of Chap. 77, (title, Judgments, Decrees and Executions), is as follows: "Every execution issued upon a judgment shall direct the collection of interest thereon, from the "date of the recovery of the judgment until the same is paid, "at the rate of six per cent. per annum."

The sections cited or referred to, are all of them copied from older statutes which were in force when the following Equity decisions, involving directly or indirectly the question of interest, were made.

In *Darst vs. Collier*, 86, Ill., 95, p. 101, (1877), the Supreme Court, upon an express reference to Sec. 3, of Chap. 74, of the R. S. of 1874, affirmed a decree in which interest from the date of an award had been added and included in the decree as in this case. See also *Palmer vs. Harris*, 100 Ill., p. 280.

Where a judgment at law has been obtained on a bond, the Equity decree should include statutory interest from the date of the judgment. *Wayman vs. Cochrane*, 35, Ill., 152.

Interest on a foreign decree can be recovered in this state. *Warren vs. McCarthy*, 25 Ill., p. 104.

Equity decrees draw statutory interest. *Aldrich vs. Sharp*, 3 Scam. 261; *White vs. Haffaker*, 27 Ill., 349; *Warren vs. McCarthy*, 25 Ill., 95.

A decree can only draw six per cent. interest. *Hunter vs. Hatch*, 45 Ill., 178; *Haas vs. Chi. Bdg. Society*, 80 Ill., 248; *Dinet vs. Eigeman*, 80 Ill., 274.

In cases of *tort*, interest may be allowed as damages. *Lincoln vs. Claflin*, 7 Wall., 132.

In the Lucille, 15 Wall., 676, interest was added in an admiralty case, when interest is not usually allowed.

In *Mitchell vs. Harmony*, 13 How., 115, it was held that interest was to be computed from the day when the judgment was signed, thus ignoring the recording or enrollment.

The allowance of interest under the Act of 1842 is fully considered in *Perkins vs. Forniquer*, 14 How. 326.

In *Bank of Kentucky vs. Wistar*, 3 Pet. 41, this Court allowed interest to be dated back, on a decree from which it had been omitted by clerical error.

In *Penhallow vs. Doane*, 3 Dal. 54, one point of error assigned was that interest on a decree for damages had been carried back of the decree. Some of the reasoning seems to be against its allowance, but the decree was affirmed without excluding such interest. The entire account is found on p. 89, and the order on p. 120.

The cases cited by appellant are not in point here. In *Silsby vs. Foote*, the Court simply remarks, that a majority are of the opinion that there was error in the allowance of interest. In *Mowry vs. Whitney*, and in *Littlefield vs. Perry*, the Court

reserves the right to include interest, and in *Parks vs. Booth*, the Court says that the better opinion is, that profits are to be regarded as unliquidated damages, which do not usually draw interest without a special order of the Court.

By the laws of Illinois, unliquidated damages do draw interest *from the date of the Master's Report*, and the case at bar is, to this extent, taken out from under the rule, in the cases cited by appellant.

There is in the case at bar, a special clause in the decree allowing interest.

It will doubtless be contended, in answer to the law cited by the appellee, that the sum allowed by the Master was different from that decreed by the Court, but as the difference is in appellant's favor, it cannot make this difference a cause for complaint, nor for an assignment of error, and attention is called to the fact that no exception is made or error assigned for this cause.

If the decree of the Court below is considered as in fact, although not in form, a *nunc pro tunc* decree, then it is right, as we have a right, under the record, to assume that the decree was held by the Court for the intervening time.

A *nunc pro tunc* decree is always admissable, when the delay has arisen from the act of the Court.

Gray vs. Brignardello, 1 Wall., 627.
Fuller vs. Stebbins, 49 Iowa, 376.
Freeman on Judgments, Sec. 27.
Frame vs. Frame, 16 Ill., 155.
Howell vs. Morlan, 78 Ill., 162.

This last case was an action at law, and the Court entered judgment on a verdict that was a year old.

The facts of the case at bar are peculiar, and unlike those presented in any other case where the question of interest has been considered, and they fully justify the allowance of interest from the time the Master filed his report. This Court decided when the case was previously before it, that the appellee was entitled to recover for the rails mended on certain machines, at the rate of thirty-six cents per foot, and if the Court, upon the evidence then before it, could have determined the number of feet mended, it would then have rendered judgment for the amount, which would have been arrived at by a simple arithmetical calculation, and the appellee would have thus had a decree for the amount found in the present decree.

But on account of the inability of the Court to determine the number of feet, the case was sent back to have that done which this Court was then unable to do. When the Master's report upon the new reference was made, the Court below then had before it the evidence which determined the number of rails mended, and upon which this Court would have made the numerical computation required, if the evidence had been before it, and upon which it would have rendered the decree now before the Court. The right of the appellee to such a decree, when the record should present the evidence which this Court required for its action, and which it had in the other causes, was fully established, and the Court below was fully justified in finding that the appellee was, "on the twelfth day of July, A. D. 1879, entitled to a decree against the defendant," and in giving him interest from the day when he became so entitled. If the report then filed had been before this Court at the former hearing, a decree would have been then entered for the appellee. In no just sense can it be said that the damages, after the filing of

the report, were unliquidated, for the right of the appellee to recover, at a specified rate, for the number of feet of rails mended, had been judicially determined, and nothing remained to be done but to make an arithmetical calculation upon the data then appearing of record.

RULE OF DAMAGES.

The rule of damages has already been settled for this case, and it is not now open for discussion or revision, and the attempt of appellant to apply the *reductio ad absurdam* to the rule, is outside of the matter in hand, besides being unsound.

The growth of a business in which a gives machine is used, in no way affects the rule of damages, and if all of the roads had used mended rails, and had used these machines for mending, the amount stated would not only have been as large as the amount stated by appellant, but it would, in fact, have been more than double that amount.

Whether a large or small amount of business is done, only affects the amount of money earned, it has no effect on the rule of damages. It is only a question of amount of use, and it does not make any difference whether the user is a wholesale or retail user.

The amount of the recovery seems large only when separated from its surroundings; when compared with the millions of dollars of the gross earnings of the roads, it becomes small. $222,000 for 300 miles of road, is $740 per mile, for eight years, or $92,50 per mile, per year, or about 25 cents per day.

When we consider the high price of iron during and fol-

lowing the war, when these infringements were made, this amount is insignificant.

The rule in *Mowry vs. Whitney* does not apply to the supposed case of bible printing, as making books by types and presses is not the same art as making them with a stylus or pen, and there is, therefore, no legitimate comparison between them.

Making books by machinery, was originating a new art, which had no relation to anything previously existing, while in this case the same art had a prior existence, and had for its highest development an inconvenient and slow working anvil, with the same hand tools that are still in use. The advance in the art was about the same as it was in the art of printing, when the travelling hand pressure roller was abandoned for the platen lever press, for taking impressions, to which condition of affairs the rule in *Mowry vs. Whitney* applies.

In the making of pins a large number of now disused machines intervened between the present perfected machines, and the hand made pins. There was the pointing machine; the machine for winding on the separate head, made of smaller wire; and the solid heading machine. In this art, the single machine for cutting, heading, and pointing, is to be compared with the three separate machines for doing the same work, and not with hand work, so that the rule of *Mowry vs. Whitney* again applies.

The comparison between a locomotive and train, with a horse and wagon, and a railway track to a common road, because both are land conveyances, is absurd. Mule driving and engine driving are not in the same art. As one of the old school books puts it, "The *rule of three* can only be applied

when the things are the same. There can be no ratio between five bars of music and four pigs."

Appellant's brief, p. 16, says that this precise objection to the rule in *Mowry vs. Whitney*, has never before been urged, which is undoubtedly true, but the process of reasoning or argument, adopted by appellant, would demonstrate the "rule of three" to be equally absurd. The fundamental error is in appellant's premises.

The same radical error exists as to the Springfield bayonet machine of 1845. It belonged to another art. Rails could no more be mended in that machine, than they could be in a printing press or a pair of tongs.

Counsel for appellant endeavors to show that the rule in *Mowry vs. Whitney* is wrong, because he thinks in the cases he supposes, it would work injustice, and its application be absurd. The cases which he assumes differ both from *Mowry vs. Whitney* and from the present cases, in one most important particular. In the cases he supposes, the hypothetical defendant sells the fruits of the invention at a price greatly below the prices prevailing before the introduction of the invention.

But if he had continued to sell at the same prices as before, would there be any iniustice in holding him liable for what he actually received, even if the amount were very large? In *Mowry vs. Whitney* the infringer did not sell his goods at a lower price by reason of his use of the invention. He simply sold them at the same price, but at a higher profit, and that profit he was compelled to account for. So in these cases, the Railroad companies did not carry passengers cheaper by reason of their use of Cawaod's invention, they simply reduced their expenses, and so increased their profits, and they are, by the rule in *Mowry vs. Whitney*, required to account for those profits and for nothing else.

ILLINOIS CENTRAL CASE.

No. 112.

The former or old record was made up and printed in this case, while the new or additional testimony has been printed in the M. S. & N. I. Case, No 113, for the reason that it was all taken in that case, and has no relevancy to this case. No additional testimony has been taken on this accounting.

The Master's Schedule, "A," p. 11, refers only to testimony printed in the former record.

The only errors insisted on in this case are, that the Master found too large an amount for appellee; and the allowance of interest by the Court.

ERRORS.

The first assignment of error is for overruling the 2nd, 3rd, 4th, 7th, 8th, 10th and 12th exceptions.

The 2nd and 12th, may be considered together, but the 12th is the only one that has any relation to the matters in controversy.

The 2nd, 3rd, 4th, 7th and 8th, go to dates and to the standard of comparison, and are all exceptions to the former adjudications of this Court, and do not relate to any act or finding of the Master.

The 8th and 10th, relate to certain improvements supposed by appellant's counsel to exist, but concerning which the record is silent, except as to the possible breaking of some bolts, mentioned by Beebe, in one machine used by the Michigan Central R. R., which difficulty, at the most, only amounted to a defect

of construction, and as there is no evidence that it in any way affected the principle or operation of the machine, these exceptions are without foundation or support.

[Note, reference to pages, unless otherwise mentioned, are, for this case, to the former record.]

THE ACCOUNT.

We find from the Master's original report, p. 38, that more than the actual number of cut rails was deducted, as the deduction there made stood for full time, while for the time prior to February 18, 1862, the mended rails were cut out of the accounting by the Court, p. 51. We have, therefore, nothing to do with cut rails in this decree.

The 3,041, rails paid for by the suit at law, were rails mended prior to July 3, 1861, while the title was in Turrill and Wormly (see Declaration, p. 59), so that those rails have no standing or place in this accounting, but if they originally had a place they could not now be considered, as they were there deducted, p. 38.

Clark, p. 146, Cr. Ints. 3 and 4, says that one of the Beebe & Smith machines was used more or less, and one only a short time, and he states the number mended on them at 542 rails. This is the entire record for these machines, and it is just as the Master has found, so that there is no contention as to these machines.

The bayonet vise was used at the Weldon shop (sometimes called the Chicago shop, as Weldon is in the city). Clark, p. 147.

Cr. Int. 11, says that between 600 and 700 rails were mended on this machine prior to 1869, and the entire mending for this shop in 1869, was 698 rails. (See Morehouse, p. 856). If we give the entire mending of 1869 to this machine, (the answer, p. 14, states that there were three machines in this shop, two prior to 1865, when another was added) then we have for this machine only 1,348 rails, or 452 less than the number deducted by the Master on this last reference.

Following Clark's statement, and taking one-third of the year 1867, (Sept. 1), and all of the mending reported for the years 1868 and 1869, at Weldon, then we have as allowed appellant, 208 more rails than the entire mend of the Weldon shop where this machine was used, but it would certainly be fair to divide the entire mending (1,592) by two, and this would give the bayonet vise machine a credit of 796 rails, which would tally with Clark's statement for the time previous to 1869; thus making a mistake in appellant's favor of 1004 rails.

It will be further seen that for this bayonet vise machine the Master estimated its use up to Sept. 1, 1870, while the account from which it was deducted, stopped in Dec. of 1869, thus giving the machine a fictitious credit of eight months.

The 50 rails per month mentioned on p. 264, refers to mending for 1870 on the main line of the road, which main line does not come within 100 miles of the Weldon shop, while the Centralia shop, also mentioned, is at the junction of the main line and the Chicago branch. If the Master had been at liberty to amend his former finding, these rails should have been added to the infringing account instead of being deducted.

As appellee has not filed any exceptions to this part of

the case, the attention of the Court is called to these facts to show that appellant has no cause for complaint, and no standing for its exceptions.

The Master has allowed the single bayonet vise machine, one-half for all the frogs made or mended at the Weldon shop, and calls attention to the fact that there were *three* machines in use at this shop. This is certainly a little more than fair for appellant.

In view of these facts, it is difficult to understand appellant's 12th exception, and it is the more difficult from the fact that we have not been able to find any facts or figures in the record corresponding with the statements and figures there given. Thus, the total number of rails mended from 1862 to 1869, both inclusive, is nowhere stated, as we can find, to be 136,852. The number reported by Morehouse, pp. 856-7 and 8, for these years, is 190,448, without frogs, and for 65,381 of these he reports them with cut rails *excluded;* and for 56,193 more, he reports the number of cut rails as actually included 10,033, which being deducted leaves 46,160 rails from which cut rails are accurately eliminated, or a total of 111,541 rails. A summary of his statements is as follows:

Reported, with cut excluded, - - - -	65,381
" " " included, and No. stated, - -	56,193
" " " " " not stated, -	11,350
" unknown as to whether included or not,	57,524
	190,448

For the shops reported as not stating whether cut rails

were included or not, we find the average mending per rail, reported by Morehouse, as follows:

Weldon, full time,	- -	average mend,	26 +	inches.
Champaign, '62 to '68	- -	"	"	18	"
Du Quoin, '62 to '67	-	"	"	14 +	"
Dubuque, for 1868,	- - -	"	"	21 +	"
Dyersville, " 1869,	- -	"	"	19⅔	"
Vandalia, " 1866,	- - -	"	"	9 +	"
Decatur, " "	- -	"	"	10	"
El Paso, " 1865	- - -	"	"	14	"

This exhibition shows that cut rails were not included for Weldon, Champaign, Dubuque, and Dyersville; and that they are included for Du Quoin, Vandalia, Decatur, and El Paso.

There is no evidence or foundation for deducting 7,785 rails as mended on the Beebe & Smith and bayonet vise machines. As before seen, the Master in deducting 2,342 for these machines, deducted 1004 too many.

The 3,041 rails, covered by the suit at law, were mended prior to July 3, 1861; for the years 1868 and 9, cut and mended, are both given, at which time cutting had grown more common, (see Healey, p. 708, Ints. 32 and 33,); the record shows the average for cutting to be one-sixth instead of one-fourth, and as of the entire number of rails, reported by Morehouse, there were 65,381 where cut rails were not included, the average for the whole is less than one-tenth, therefore, too many rails were originally deducted for this cause.

Thus the cut rails have been deducted, first by the Master, then by the Court, and for 65,381 rails, by the witness Morehouse.

To deduct cut rails now, is deducting them a third time; and for 65,381 rails, a fourth time.

The Master originally reported, without frogs, 188,797 rails, after deducting 33,142 cut rails.

The Court reduced the number of rails mended, by throwout all mended prior to Feb. 18, 1862, and reduced the price from 48 to 36 cents per foot; from this we find that the Court originally deducted 30,298 rails, which was 22,408 rails more than the number included in the original schedule for prior time. In fact, the Court must have deducted cut rails a second time, to have taken out so many rails.

A reduction from 48 to 36 cents per foot, would have reduced the former finding of the Master from $144,051.48, to $108,038.61, from which it appears that in reducing the judgment to $91,980.33, the Court deducted $16,058.28 for rails taken out of the account, which, at the found rate of 53 cents per rail, would give 30,298 rails.

The Morehouse tables, p. 856, from which the schedule, p. 38, was mainly made up, shows only 9,491 rails mended prior to 1862; of these 3,941 were paid for in suit at law, and deducted by the Master, leaving only 6,450 as mended prior to 1862. The average mending for 1862, Sundays and Holidays included, is thirty rails per day; this for 48 days, gives 1,440 rails mended prior to Feb. 18, 1862, and a total 7,890 rails originally included, that were mended prior to appellee's title, but the Court below deducted 22,408, additional rails, after the Master had deducted more than all of the cut and straightened rails, and thus favored appellant to the extent and amount of $11,-876.24.

The original judgment should have been $103,856.57. If

gives 3,762,454 inches, or dividing by 12; 313,538 feet. Add for frogs 24,602 feet, and we have a total of 338,140 feet. Deduct 1-6 of 212,448, whole number of rails, for cut rails at six inches per rail, 17,704 feet, and we have total feet, 320,416 actually mended. Multiply by 36 cents, and we have $115,349.76. Deduct for non-infringing machines $2,802,78 and we have left, $112,546.98 as the amount due from the I. C. R. R., on the basis of the report adopted by appellant.

Attention of the Court is called to the fact that appellant has not only deducted ¼ for cut rails instead of 1-6, as reported by the Master on the page cited, but it has deducted them at 17.71 inches, *thereby multiplying the number of inches and feet by three*, as cut rails were stated by the Master and by all of the witnesses, at six inches only, and for one shop four inches.

INTEREST.

We have seen in case No. 113, that in allowing interest from July 12, 1879, the court strictly followed the interest laws of Illinois. There is, therefore, nothing in the second error assigned, in this cause No. 112, and it is not here re-argued.

RES JUDICATA.

" A verdict and judgment of a court of record, or a " decree in chancery, although not binding on strangers, " puts an end to all further controversy concerning the " points thus decided between the parties to such suit."

Hopkins v. *Lee*, 6 Wh. p. 113.

Thompson v. *Roberts*, 24 How. 233.

A court of chancery cannot review the judgment of the Supreme Court.

Ballance v. *Forsyth*, 24 How. 183.

" The plea of *res judicata* applies to every objection " urged in a second suit, when the same objection was " open to the party within the legitimate scope of the " pleadings in a former one, and might have been pre- " sented in it."

Aurora City v. *West*, 7 Wall. 82.

Cromwell v. *County of Sac*, 94 U. S. 351.

The same rule applies in equity suits.

Corcoran v. *Ohio Canal Co.*, 94 U. S. 741.

In these cases at bar, all of the preliminary matters were adjudicated, and decisions were affirmed in three of the five cases, presented on the same record now in the I. C. R. R. case, No. 112 of this docket, and this record is in no way changed by the additional proofs taken in the M. S. & N. I. case, No. 113.

The exceptions in the I. C. R. R. case, No. 112, which cannot be considered, are: the 2d, which was the old 27th, and overruled in terms; the 3rd,

which was the old 11th, except as to matters added on account of the opinion of this court; the 4th, which relates to nothing except the finding of this court; and the 7th and 8th which are, in all of their points, exceptions to the opinion delivered by this court in this cause. Thus, as is elsewhere stated, leaving the 12th as the only exception which relates to the case, that has not been adjudicated.

The first fifteen exceptions in the M. S. & N. I. case (No. 113) are in the same condition as the first eleven in the I. C. R. R. case (No. 112) as the 2d is the old 27th, the 3d the old 11th, the 14th the old 41st, 42d and 43d, while the 4th, 8th, 9th and 11th are exceptions to the former adjudication of this court.

In the previous findings in this case, Cawood Patent, 94 U. S. 695, the court found:

First—That the angle iron machine did not belong to the same art as the Cawood (*p.* 701).

Second—That the Bayonet Vise of 1845 taught nothing, as it did not belong to the same art (*p.* 703).

Third—That the Illinois Central, Ethridge and Whitcomb machines (all rack and pinion machines) were the same as the Cawood (*pp.* 704–5).

Fourth—That all the former exceptions were passed on by the court (*p.* 709).

Fifth—That this court re-examined the accounting, performing the duties of a master (*p.* 709).

Sixth—That the estimate of profits is correct (*p.* 709).

Seventh—That the gain in mending is to be estimated from the common anvil as the starting point for measuring the profits or damages (*p.* 709).

Eighth—That thirty-six cents per foot was not too high (*p. 710*).

Ninth—That the decrees contain no allowance for profits made prior to appellee's title (*p. 710*).

Tenth—That the question is not what appellant might have done, but it is in reference to what it did do (*p. 710*).

Eleventh—That the only error in the original decree was that it contained profits for mending on machines that appellee did not own, therefore deductions must be made to this extent.

The sole exception taken by appellee is to that part of the order of the Circuit Court (p. 3, new record, in No. 112, and p. 3 in No. 113), which permitted appellant to enquire into the measure of damages before the master, as it was contrary to law and was settled by the findings of this court; but as the master reported nothing on this branch of the case, the only harm that comes to appellee is that appellant uses it as a pretext for importing into this case a mass of irrelevant and unnecessary law and logic, which requires an answer, lest silence should be taken as consenting.

The record shows that if errors were made, either by the master or by the court, they were all in favor of appellant in each case, and the decrees cannot therefore be reversed.

"Whatever has been decided here upon one appeal "cannot be re-examined in a subsequent appeal in the same "suit. The subsequent appeal brings up only the proceed-"ings of the Circuit Court after the mandate of this court."

Supervisors v. *Kennicott*, 94 U. S. 498, and cases there cited.

ARGUMENT.

These cases were remanded " for further proceedings " to be had therein in conformity with the opinion of this " court." They were remanded, not because, as to the machines which infringed, the court below had erred in instituting a comparison between the cost of mending rails on those machines and the cost of mending on the common anvil. The error to be corrected was, that the decree embraced the work on machines which did not infringe. In the three cases where this error was not present, judgment was given against the companies. Now, if it was an error to make a comparison between the cost of doing work on the infringing machines, and the cost of doing it on the common anvil, that error was present in the other cases, and would have required correction. If these appellants are entitled to have a comparison instituted between the cost of doing work on the infringing machines and the cost of doing it on the non-infringing machines, the appellants, in the other cases, were entitled to have the same comparison made. But with the fact fully before it, that there were non-infringing machines on which the work could have been done, the court was of this opinion: " We think the weight of the evidence leads " to the conclusion that the number of feet mended on the " infringing machines, *the gain in mending, compared with* " *the cost of mending on the common anvil* (which the " court must have determined was about thirty-six cents " per foot), considering the saving of labor and fuel, were " such as justified the decrees that were made."

Now, the court could not have held this opinion if the parties were entitled to have a comparison made between the cost of mending rails on the non-infringing machines, and the court below would not have taken "proceedings in accordance with this opinion," if it had instituted a comparison with the non-infringing machines instead of the common anvil.

If the comparison now claimed by the appellant was the proper one to make, this court must have done great injustice in the cases in which it affirmed the judgment of the court below, based upon a comparison with a common anvil. There is nothing in the opinion which would have justified the court below acting *in accordance* with that opinion, in doing that which the appellant now contend it should have done.

It may be well to note here, that the "Bayonet Vise" and the "Michigan Southern" is the same machine, and that the "Whitcomb," "Etheridge" and the "Illinois Central" are all different names for the rack and pinion machines.

The real, and as we understand it, the only matter to be determined under the mandate and opinion of the Supreme Court is: how much is to be deducted from the previous decrees, for rails mended upon the non-infringing machines. But as the appellant persists in attempting to review the decisions of this court, and in bringing in new and irrelevant issues, it is thought best to consider them.

The exceptions relating to the measure and standard of damages are considered under the protest (*See complainant's exception to order, p. 3*) that they do not belong in the case, as they are all exceptions to the opinion of this court,

and are not exceptions to anything done by the master, or to anything that could be done by him. They are all exceptions in the nature of a bill to review the findings of this court, and they cannot be considered at this stage of the proceedings.

The third and fourth exceptions ignore the finding of this court, which found that the Springfield bayonet machine was not a rail-mending machine, and that it taught nothing in that art, and it also relates to machines *later* in their origin than the patent, which cannot, therefore, be considered.

The eighth is bad, in that it relates to the art as it now stands, instead of relating to it as it existed at the date of the patent.

The ninth is merely fanciful rhetoric, as within the meaning of the patent laws, the Cawood machine has not been improved.

These exceptions present really but two points or questions, which are considered in their order.

1st. Whether a machine that was not designed to do the work of the patented machine, and which did not and could not do such work, can be rebuilt and changed in its parts to defeat the patent.

This question is raised, by the 4th exception, and in reference to this old 1845 Springfield machine, diminutive in size, having its conforming opening vertical and adapted solely to the purpose of welding collar blanks on to the shanks of bayonets, this court, after considering it at length, disposed of it as follows :

" These several differences are too many and too " great to be considered merely formal. Not only the

" object of Cawood's devices was novel, but so also was " the functions of the blocks, their combination with each " other, and the mode of operation. The general appear- " ance of the Bayonet machine, and as we have said, its " distinctive character, was that of a vise. We think, " therefore, it cannot be regarded as containing the prin- " ciple embodied in the Cawood invention. We cannot " think it could teach how to make the improvement in " the common anvil or swage block, for reforming and " welding the ends of railroad rails, which was devised by " Cawood, and which has gone into large use." 4th Otto, p. 703.

It is now contended that this old machine is the rudimentary prototype of the Bayonet Vise machine built in 1865, and that, therefore, the Bayonet Vise machine relates back to the Bayonet machine of 1845.

It is difficult to see how any such theory can be sound, as to the measure of damages, and at the same time be unsound on the question of novelty, or in other words how the Bayonet Vise machine of 1865 can relate back for one purpose, and not do so for all other purposes.

The fact found by this court, that this Springfield machine did not teach the art of re-forming the ends of railroad rails, is a sufficient answer to these exceptions.

This matter of relating back without regard to form and purpose is unsound, in all particulars, in its relation to the application of the patent laws, for each and every machine can be dissected, and each part traced back to some prehistoric original. Wheels, levers, wedges,

inclines, cams, cranks, cogs, and all of the principal mechanical devices are older than history.

The only relationship that exists between the old Springfield Bayonet machine, and the so-called Bayonet Vise machine is, that both are classed as vises. The name "Bayonet Vise," which has become attached to this machine, is a mere fanciful conceit. It is no more a bayonet vise than it is a blacksmith's or shoemaker's vise; it is absolutely impossible to use the machine in the manufacture of bayonets. It is not the same machine; nor are its uses, objects or purposes the same; nor is it a similar machine in constructive adapation.

2d. Whether a machine, later than the patent in its origin, can be used by appellant to change the measure or rule by which the damages are ascertained, so as to limit the recovery for the machines actually used.

If this could be done, then patents would be worthless and a delusion, for it is a fact, that as soon as a new machine is brought out in any art, the mechanics skilled in the particular art to which the machine belongs, immediately set to work to improve it, or to produce a superior one.

If a new departure is taken for reaching the result, or if a machine operating upon different principles, or with different devices, is invented, then the machine ceases to have any relation to, or bearing upon, the patent; and upon this law this court held that the Bayonet Vise and the Beebe and Smith machines did not infringe.

If the same machine is taken, and well-known devices are applied to make the movements of the machine easier, better, or more efficient, it is still the same machine; and

under this elementary law this court found that the Whitcomb, Etheridge, Illinois Central, which are all rack and pinion machines, and Cawood, were the same machines, under the modifications suggested in Cawood's specification.

If the same machine is taken and new parts are added, so that the machine will perform additional labor, results or functions, then it is an improved machine, and it is not otherwise an improved machine.

Smith v. *Nichols*, 21 Wall. 112.

There is no proof in the record that the Whitcomb, Illinois Central, and Etheridge machines, were improved machines, within the meaning of the patent law. There was not, and is not, anything under the head of improvements, nor in fact any improvements, for the master to consider.

The master is precluded from supposing that the infringing machines contained any other than the merest mechanical equivalents. On this the court said:

"It is but faintly contended, if at all, that the Illinois "Central, the Etheridge, and the Whitcomb machines, are "not infringements of the Cawood. *The principle of each* "*of them, the object sought for, the combination and ar-* "*rangement of the parts*, and *the mode of operation* for "the purpose of effecting the described result, *are so mani-* "*festly the same as that described in the complainant's* "*patent*, that a detailed examination of them is unneces- "sary."

The exceptions, therefore, go to the finding by this court, and not to anything found by the master, or contained in his report.

The authorities are uniform, on the question of the novelty or validity of a patent, that a machine later in its origin than the patented one, cannot be considered or have any effect in the determination of this question. They are numerous and undisputed, and, therefore, only *Blanchard* v. *Putnam*, 8 Wall. 420, is cited.

It is difficult to understand, upon principle, why a halt should be called in the art as it stood when the invention entered into it, for the purpose of determining its *extent and boundaries*, and the same halt should not be called for a determination of its *value*.

A distinction between the three starting points is so manifestly absurd, that it has never before been raised, and there is no direct authority upon this, that we have been able to find. In all of the authorities, the art as it stood at the date of the invention, has been *uniformly* the starting point for determining the extent *and value* of the invention, and it was so held by this court in these cases.

The court says: "Having thus endeavored to ascer- "tain what is the true idea of the patent, we are prepared "to examine the devices which the appellants contend "were *in existence and use before Cawood made his inven-* "*tion.*" The older art was found to be the common anvil, and on the question of the value of the invention, the court further says:

"Nothing in the decree exhibits what was the com- "parative cost of repairing with the *patented machine and*

" *with the common anvil.* The cases have come to us in " such a condition that we are called upon to perform the " duties of a master. * * * We think the " weight of the evidence leads to the conclusion that the " number of feet mended on the infringing machines, *the* " *gain in mending, compared with the cost of mending on* " *the common anvil* (which the court must have determined " was about thirty-six cents per foot), considering the sav- " ing of labor and fuel, were such as justified the decrees " that were made."

It will thus be seen that, in these cases, this court used the same state of the art, and made the same stop in the art for the measurement of the damages, that it did in determining the novelty of the invention.

This uniform rule of starting both inquiries (novelty and value) at the same date, to wit: the date of the invention, is not deviated from in the cases cited by the appellants, as an examination of them will demonstrate.

The appellants has fallen into this error by giving the word " then " in *Mowry* v. *Whitney*, 14 Wallace, 620, a wrong meaning. Whitney's patent was granted in 1848. There was set up as anticipating it, The Artists' Manual of 1814, Philosophical Transactions of 1840, and Holtzapfel of 1843. These are the dates given, but the date used all through the decision is 1847 (see pp. 640, 642), from which it clearly appears that 1847 is the only date to which the word " then " can refer, the date of the invention being a year back of the date of the patent. The misreading of the case by the appellant is in referring the word " then " to the date of *the infringement*, and not to the date of *the invention*, as it should.

In patent matters no more absurd statement could be made then to say that an infringer's rights *to use* the patented invention *increased* with the age of the patent, or that as soon as an improved or new machine appeared, the patent became worthless and practically such public property, that it could be used without compensation. Yet this would be the result of what appellant now contends for as sound law.

If an improved or new machine in any way affected the measure or rule of damages, then the rule of damages would change each time such a machine made its appearance, and such an element of uncertainty would be introduced into the administration of patent law as to destroy the value of all patents.

The Bayonet Vise and the Beebe & Smith machines are both later in their origin than the Cawood, and they cannot be considered in reference to the measure of damages, any more than they can be considered on a question of novelty.

The case of *Serrell* v. *Collins*, 1 Fisher, p. 289, no more sustains the appellants' position than *Mowry* v *Whitney*. In this case, the only machines referred to, as affecting the compensation, are two—one the Woodworth of 1828, and the other the Sigler of 1843. The date of the patent was 1848. On pp. 293 and 4 the learned judge, in five different places, gives the date of 1848 as the one limiting the defendants to devices which they had a right to adopt.

It is evident that the judge only intended to permit evidence as to machines existing prior to the date of the

patent, for the purpose of reducing damages, or determining values.

The small part of the case of *Black* v. *Thorn*, 7 O. G., p. 176, taken in its disconnected position, seems to afford the appellants some consolation; but when it is connected with the rest of the case, reported in 10 Blatchford and in 5 Fisher, p. 550, we find that all that is decided by this case is that the defendant had a right to rebuild a machine older than the patent, that had gone out of use (not to alter it), but test it, and show what it would do, when proving the profits upon a reference to the master. When we get the parts of the case together, we find that it ceases to be an authority at all upon the point in controversy, and we therefore repeat our original proposition, that the authorities are uniform in holding the date of the invention to be the halting and starting point for the determination of the questions of novelty, measure of damages, and utility.

The question of a license under the later Beebe & Smith patent is not considered, for when these machines are taken out of the case, as ordered by this court, we cannot see what possible relation to the remainder of the case the ownership of these machines can have, and besides this, the appellant is fully answered by this court in *Blanchard* v. *Putnam*.

What might have been done on these non-infringing machines is fully answered by this court as follows:

"There is nothing more in these cases that we feel "called upon to notice, except the suggestion that repair-"ing railroad rails was unprofitable, compared with what "*might have been done*. It has been argued that it would

" have been better for these defendants, if, instead of re-
" pairing the crushed and exfoliated ends of the rails,
" they had cut off the ends and relaid the sound parts, or
" had caused the rails to be re-rolled. Experience, it is
" said, has proved that repairing worn out ends of rails is
" not true economy, and hence it is inferred that defend-
" ants have derived no profit from the use of plaintiffs'
" invention. *The argument is plausible, but it is unsound.*
" Assuming that experience has demonstrated what is
" claimed, the defendants undertook to repair these
" injured rails. * * *

" In settling an account between a patentee and an
" infringer of the patent, the question is, not what profits
" the latter has made in his business, or from his manner
" of conducting it, *but what advantage has he derived*
" *from his use of the patented invention.*"

The rule for determining the measure of this advantage is given by the court, and its instructions have been followed, and from the fact that the *amount* of the work done on the later non-infringing machine affects the *amount* of the recovery, we should not fall into the error of supposing that the *measure of, or rule* for computing the damages was in a like manner affected.

The shifting rule contended for by the appellant would introduce into the administration of the patent laws such an element of confusion and uncertainty as to destroy all patents.

The measure of damages good to-day would be bad to-morrow, and, by the appellant's rule, each improver would destroy his predecessor, and all that would be required to destroy the *value* of any patented machine

would be to improve it, or, in the light of its construction and operation, reconstruct some old worthless machine that could not do the work, into a new one that would, and then claim that it related back to the inoperative prototype, in order to give it age. Appellant's rule would also give the latest improver all that there was left in the entire art.

There must of necessity be some starting point, some high or low water mark to determine the height of the flood. In all measurements the very first thing is a starting point; there cannot be a measurement without it. In inventions the starting point for measuring the height, length, breadth *and value* of an invention has always been the state of the art when the invention made its advent, *and from the nature of things there cannot be any other rule.*

The fundamental error of the appellant is this: It seem to suppose that a more recently discovered but independent way of accomplishing a result, can be used to measure the *value* of an older discovery or invention, and to utterly eclipse and defeat it if equally good in its results.

This court has drawn the proper and exact line on this subject. It has said in these cases that the appellee can have the value of the invention, where his machines, and those involving the patented invention in their construction, were *actually used*, and that where later and independent machines have been *actually* used, he can have nothing.

Later, independent machines affect the *amount* of the recovery to the extent that they have been actually used,

but they in no way affect the *value* of the original invention, or the *standard for measuring its value; when it has been actually used*, it must be paid for by the original standard.

If the comparison now contended for by the appellant is the correct one to be made, the court had before it all that was necessary to enter a final decree, for if there had been no profits made, as the appellant claims, under the comparison now claimed, it was not necessary to ascertain how much was done by the non-infringing machines. Not only so, but the appellants in the three cases affirmed would have been entitled to the benefit of the same comparison, and there could not have been any decree against them.

The supposition of appellant (bottom of p. 3, brief), that the mandate called "for a new accounting, based in "the finding that neither of the machines (B. and S., and "B. V.) was an infringement of the Cawood patent," has led it into an error which is best answered by this court, 94 U. S. p. 708, where the following appears:

"It follows from what we have said, that the decrees "must be reversed and set aside, *so far* as the defendants "have been held accountable, *for the use* of the Beebe & "Smith machine, or the Bayonet Vise, or the Michigan "Southern. But so far as the Whitcomb, the Etheridge, "the Cawood, or the Illinois Central have been used, the "defendants are answerable to this complainant."

On pages 710-11 it is stated that there is no error in regard to the infringing machines in the former decrees.

It is evident that a correction of the old accounting on the old basis was intended, and that a new accounting

on a new basis was not ordered or intended, and the fact that the later non-infringing machines were treated as of equal capacity with the infringing machines was before this court on the former appeal, and the case came back for a simple arithmetical subtraction, when the proper amounts were ascertained.

LAW POINTS.

An anterior machine, to have any effect upon a patent, must be complete in itself and capable of producing the same results.

Seymour v. *Osborne*, 11 Wall. 516, p. 555.
Curtis on Pats., §§ 378–378[a]–378[b].

Changes or modifications of an old machine so as to produce new results, are new machines, and are patentable.

Seymour v. *Osborne*, 11 Wall. 548.

Rails cannot be mended on the Springfield Bayonet machine — it does not therefore affect the Cawood machine.

The Bayonet Vise or Michigan Southern machine of 1865 is not the Springfield Bayonet machine of 1845.

Bayonet Sockets cannot be welded to their Shanks on the Bayonet Vise machine.

Turrill v. *The Railroads*, 4 Otto, 695.

This case settles all of the questions raised by this class of exceptions, and they are in fact exceptions to this opinion, and are either idle, or an attempt to review the whole case.

This court settled the question of the *measure of damages*, by finding that the common anvil or swage block was the best thing known for mending rails *at the date of the patent*, and that the comparison with that machine is the proper one.

The Springfield Bayonet machine was then before the court with the Bayonet Vise and the Beebe and Smith machines.

The court did not order a *new* measurement of damages, but a deduction *on the basis of the old measurement*.

In *Corning* v. *Burden*, 15 How. 252, the court held that a junior patent, under which the defendant was working, might be introduced for the purpose of balancing the *prima facies*, and to rebut malice, by thus showing that he was acting in good faith.

In *Blanchard* v. *Putnam*, 8 Wallace, 420, the court held that a junior patent, though used by defendant under a license, was inadmissible on the questions of novelty and of infringement. In this case plaintiff's patent was dated December 18, 1849, and reissued, defendant's patent was dated March 11, 1856, reissued May 27, 1862. If the question of infringement relates back to the date of the invention, it is folly to say that the measure or rule of damages *for such infringement* does not.

In *Bates* v. *Coe*, 98 U. S. 31, it was held that a patent in suit relates back to the date of the application when that is shown, and to the true date of the invention when that is proven, and that a patent set up in a defense cannot be carried back to its actual date of application or invention.

The first part of this decision is familiar law. See:

Curtis on Patents, § 342.

Parker v. *Hulme*, 1 Fish. 52.

Bartholomew v. *Sawyer*, 1 Fish. 520.

Judson v. *Cope*, 1 Fish. 623.

Dixon v. *Meyer*, 4 Wash. 72.

The last part is new, and its utility in this case is to show, that dates for a defendant's machine cannot be carried or related back, either by proofs or file dates in the Patent Office, and that the Bayonet Vise Machine cannot be related back of its actual date of construction in 1865.

Mowry v. *Whitney*, 14 Wall, 620: (Circuit cases, 3 Fish, 151; 4 Fish, 141–207.) This case does not sustain the appellant's position that the "then open," etc., relates to the date of infringement instead of to the date of the patent, for the reasons:

1st. That there is nothing junior to the patent set up or mentioned in the case except the defendant's own patent of 1861, and on this point of his junior patent this court says in terms, p. 653: "*This does not protect him against responsibility for damages.*"

2d. It is an authority against the proposition that ownership of a junior patent by a defendant, or a license, gives him any better standing than a stranger would have.

3d. That the words "then open," etc., refer to the date of the invention, and not to the date of the infringement, so as to let in machines later than the patent in their origin.

Serrell v. *Collins*. 1 Fisher, 289. This case does not sustain the appellant's position:

1st. Because the court in terms refers to the Woodworth machine of 1828, and the Seigler machine of 1843, as *the* open machines which the defendant had a right to adopt as against the plaintiff's patent of 1848.

2d. Because the court in terms refers to the date of the patent as the date of inquiry, p. 294. "Was the thing granted, therefore, known or '*in use before the filing* of the specification of the patent of 1848.' "

3d. Because the point now raised was not raised or involved in the case.

Black v. *Thorn*, 5 Fisher, 550–7, O. G. 176. When that portion of the case which is in the O. G. is read in connection with the prior part of the case referred to in 10 Blatchford, 66, re-reported in 5 Fisher, as cited, we find that this case does not sustain appellant's position:

1st. Because the "open method" there mentioned refers to the art as it existed anterior to the patent.

2d. Because the defendant's machines, while copied from complainant's invention, were in fact older than the patent. Complainant built a furnace in Binghampton in 1854, from which the defendant's furnaces were copied, while the patents were issued in 1855 and 1857.

3d. Because that while there were some twenty-four older furnaces set up in defense, there was not one that was later in date than the complainant's patents. So that nothing *later in date* than the patent could by any possibility have been referred to, as there was nothing of the kind in the case.

4th. Because the value in this case was not the burning up of the wet tan, but the result, which was the production of heat for useful purposes, and in no way related to the kind of fuel.

5th. The " date of infringement " or the time of use was so close to the date of the patent, that the use of such terms are the same in effect as though the words " date of invention " had been used.

The case of *Knox* v. *Quicksilver Co.*, 14 O. G. 898, does not seem to support appellant's position. It is true that the court says: " The comparison must be with ma- " chines at the time of the infringement, both known and " open to public use" (p. 899). The defendants in this case, pending a long litigation, built a " Modified Green Furnace" (Bayonet Vise), and claimed that the comparison should have been made with this modified furnace. This is appellant's exact position, and this proposition Judge Sawyer pronounced as " simply preposterous."

The other proposition, that although the Beebe & Smith machine was covered by an unexpired junior patent, yet this particular defendant, having a license, it was free to use it, and therefore the comparison for the appellant in No. 113 should have been made in reference to this Beebe & Smith machine, was by this court, in *Blanchard* v. *Putnam*, pronounced equally preposterous.

Granting all that is claimed for *Conover* v. *Rapp*, 4 Fish. 63, we fail to see how it affects the question of the time when the machine to be considered should have its first existence, or the starting point for measuring profits or damages.

The point now raised by the appellants, that *the standard* for measuring damages *only* relates back to the *date of infringement*, has not been specifically passed on, as no one has before had a sufficient misunderstanding of the law to raise it, but we have as settled law:

1. That junior patents or machines present an immaterial issue on the question of novelty.

Blanchard v. *Putnam*, 8 Wall. p. 425.

2. That they present an immaterial issue on the question of infringement.

Ibid.

3. That a license under a junior patent does not change the situation, nor does it in any way aid a defendant.

Ibid.

4. A junior patent with ownership is no protection against damages.

Mowry v. *Whitney*, 14 Wall. p. 653.

5. That the art as it was at the date of the patent, was used as the starting point for measuring damages in:

Turrill v. *The Railroads*, 94 U. S p. 710.

6. The undisputed fact that later inventions or machines, in no way affect the validity or scope of a patent.

Curtis on Patents, § 456.

As soon as a patent is issued it becomes a public record, and any one can have access to the record, files of the application, or a copy.

Boyden v. *Burke*, 14 How. 575.

The use of the words " then open" in connection with the date of infringement does not exclude " open or known at the date of the patent."

The just conclusion from all of the authorities is that the starting point for measuring novelty, utility and value is the same.

The *value* of an invention, and the *amount* to be recovered in a law suit must not be confounded.

Therefore, the day after a patent is issued, and the idea or description is thus obtained, a designing party cannot lawfully set about improving it, in order to destroy its value, or enable himself to use it without compensation, as he might do if the appellant's theory was correct or sound law.

Sec. 18, of the act of 1836, provided that on applications for extensions, the Secretary of State, Commissioner of Patents and the Solicitor of the Treasury, should constitute a board, which, among other things, should consider " the ascertained *value* of the invention " in order to determine whether the patentee had been sufficiently remunerated or not. Under sec. 1, of the act of 1848, the powers and duties of the board devolved upon the Commissioner of Patents, and the application for an extension was to be referred to a primary examiner to ascertain " particularly whether the invention or improve-
" ment secured in the patent was new and patentable *when*
" *patented*, and thereupon the said commissioner shall grant
" or refuse the extension of said patent upon the same
" principles and rules that have governed said board."

9 Stat. at Large, 231.

Commissioners' decisions were not published prior to 1869. In the extension proceedings of John E. Barrow, Com. Decis. of 1869, p. 48, we find the following: "That "the invention embraced in the patent was, *at the date*, "new, useful and of great *value*, admits of no serious "question." As the question of value in extension cases depended on proofs as to the cash value, nearly all of the reported decisions turn on the evidence furnished, but they all commence with the examiner's report on the original novelty and utility, and the starting point for value is assumed at the patent date.

We have, from the statutes and the action of the patent office, the clear showing that Congress and the office understood that utility, novelty and value all had the same starting point, so far as time is concerned.

ABATEMENT BY DEATH.

Section 955, Revised Statutes, reads that:

"When either of the parties, whether plaintiff, or pe-"titioner, or defendant, in any suit in any court of the "United States, dies before final judgment, the executor "or administrator of such deceased party may, in case the "cause of action survives by law, prosecute or defend "any such suit to final judgment," etc

In view of this statute, and in view of the fact that this court has already let in the administratrix of the appellee to prosecute these suits to final judgment, the claim for an abatement of the suits, by reason of the death of appellee, seems a little stale.

The cases cited for appellant are not in point. *Schreiber* v. *Sharpless*, 17 Fed. R. 589 (C. L. N., June

2, 1883), was a proceeding for a recovery of a statutory penalty of one dollar for each copy of a copyrighted photograph. Pending the proceedings the *defendant* died, and the court held that the action being personal for a penalty, the suit abated on the death of the defendant, in the absence of any statute authorizing its survival.

In the case of *Smith* v. *Baker*, administrator, 5 O. G. 496, the court directly held, that an action for infringement did survive. Citing

U. S. v. *Daniel*, 6 How. 11.

This last named case clearly draws the line for appellant as to what does or does not survive the death of the party. It is a complete answer to appellant's trover and case argument, as it is distinctly held that where property is involved, the action survives, and that some other form of action than that where the proper plea is "not guilty," must be resorted to.

The case at bar is in equity, where the rules relating to trustees are followed, and appellant's answer is not and it cannot be a plea of not guilty.

Appellant is equally unfortunate in citing *Gayler* v. *Wilder*, 10 How. 477. The quotation from page 494 relates solely to a question of *title*, and appellant has failed to notice the difference between rights *in* a patent and rights *under* a patent. Rights *in* parts of the monopoly are statutory, while rights *under* a patent are in the main left to be enforced by the ordinary methods and rules of procedure.

There is no statute special to patent cases authorizing executions or sequestrations to enforce judgments or decrees.

In *Green* v. *Watkins*, 6 Wh. p. 263, it was held in reference to suits pending in this court, that: "The death "of neither party produces any change in the condition "of the cause or in the rights of the parties. It would "seem reasonable, therefore, that the suit should proceed, "and not be dismissed or abated."

It was upon this case that rule 15, of the present rules, was originally promulgated.

If further authorities are desired, see:

Barribeau v. *Brant*, 17 How. p. 46.
Clarke v. *Mathewson*, 12 Pet. 164.
Rubber Co. v. *Goodyear*, 9 Wall. 788.

That the rule relating to trusteeship is followed in this class of causes, see:

Root v. *Railway Co.*, 105 U. S. p. 214.
Packet Co. v. *Sickles*, 19 Wall. p. 617.
Holland v. *Fox*, 3 Ell. & B. 977; 23 L. J. Q. B. 357.

Under the rule in *Supervisors* v. *Kennicott*, 94 U. S. 496, we respectfully submit that appellant has not, in either of these cases, made a sufficient showing to entitle it to a reversal of the decrees, and we suggest the propriety of a ten per cent. penalty.

CHAUNCEY SMITH,
LESTER L. BOND,
Counsel for Appellee.